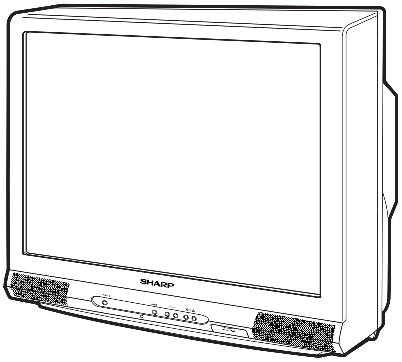
SHARP SERVICE MANUAL

S24P132F540//



COLOR TELEVISION

Chassis No. GB-3U(1W)

MODEL 32F540

In the interests of user-safety (Required by safety regulations in some countries) the set should be restored to its original condition and only parts identical to those specified should be used.

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ELECTRICAL SPECIFICATIONS

POWER INPUT .... 120V AC, 60 Hz
POWER RATING 150W
PICTURE SIZE .... 3074 cm^2 (476sq inch)
CONVERGENCE .... Magnetic
SWEEP DEFLECTION .... Magnetic
FOCUS .... Hi-Bi-Potential Electrostatic
INTERMEDIATE FREQUENCIES
  Picture IF Carrier Frequency .... 45.75 MHz
  Sound IF Carrier Frequency .... 41.25 MHz
  Color Sub-Carrier Frequency .... 42.17 MHz (Nominal)
AUDIO POWER
  OUTPUT RATING .... 5.0W + 5.0W (at 10% distortion and Dual CH Operate)

SPEAKER
  SIZE .... 12 x 6 cm oval (2 pcs.)
  VOICE COIL IMPEDANCE .... 8 ohm at 400 Hz
ANTENNA INPUT IMPEDANCE
  VHF/UHF .... 75 ohm Unbalanced
TUNING RANGES
  VHF-Channels .... 2 thru 13
  UHF-Channels .... 14 thru 69
  CATV Channels .... 1 thru 125 (EIA, Channel Plan U.S.A.)

Specifications are subject to change without prior notice.

SHARP CORPORATION

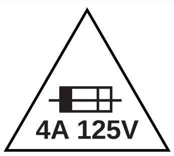
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IMPORTANT SERVICE SAFETY PRECAUTION

■ **Service work should be performed only by qualified service technicians who are thoroughly familiar with all safety checks and the servicing guidelines which follow:**

WARNING

1. For continued safety, no modification of any circuit should be attempted.
2. Disconnect AC power before servicing.
3. Semiconductor heat sinks are potential shock hazards when the chassis is operating.
4. The chassis in this receiver has two ground systems which are separated by insulating material. The non-isolated (hot) ground system is for the B+ voltage regulator circuit. The isolated ground system is for the low B+ DC voltages and the secondary circuit of the high voltage transformer.
   To prevent electrical shock use an isolation transformer between the line cord and power receptacle, when servicing this chassis.



CAUTION: FOR CONTINUED PROTECTION AGAINST A RISK OF FIRE, REPLACE ONLY WITH SAME TYPE 4A-125V FUSE.

SERVICING OF HIGH VOLTAGE SYSTEM AND PICTURE TUBE

When servicing the high voltage system, remove the static charge by connecting a 10k ohm resistor in series with an insulated wire (such as a test probe) between the picture tube ground and the anode lead. (AC line cord should be disconnected from AC outlet.)

1. Picture tube in this receiver employs integral implosion protection.
2. Replace with tube of the same type number for continued safety.
3. Do not lift picture tube by the neck.
4. Handle the picture tube only when wearing shatterproof goggles and after discharging the high voltage anode completely.

X-RADIATION AND HIGH VOLTAGE LIMITS

1. Be sure all service personnel are aware of the procedures and instructions covering X-radiation. The only potential source of X-ray in current solid state TV receivers is the picture tube. However, the picture tube does not emit measurable X-Ray radiation, if the high voltage is as specified in the "High Voltage Check" instructions.
   It is only when high voltage is excessive that X-radiation is capable of penetrating the shell of the picture tube including the lead in the glass material. The important precaution is to keep the high voltage below the maximum level specified.
2. It is essential that servicemen have available at all times an accurate high voltage meter.
   The calibration of this meter should be checked periodically.
3. High voltage should always be kept at the rated value –no higher. Operation at higher voltages may cause a failure of the picture tube or high voltage circuitry and;also, under certain conditions, may produce radiation in exceeding of desirable levels.
4. When the high voltage regulator is operating properly there is no possibility of an X-radiation problem. Every time a color chassis is serviced, the brightness should be tested while monitoring the high voltage with a meter to be certain that the high voltage does not exceed the specified value and that it is regulating correctly.
5. Do not use a picture tube other than that specified or make unrecommended circuit modifications to the high voltage circuitry.
6. When trouble shooting and taking test measurements on a receiver with excessive high voltage, avoid being unnecessarily close to the receiver.
   Do not operate the receiver longer than is necessary to locate the cause of excessive voltage.

IMPORTANT SERVICE SAFETY PRECAUTION

(Continued)

BEFORE RETURNING THE RECEIVER

(Fire & Shock Hazard)

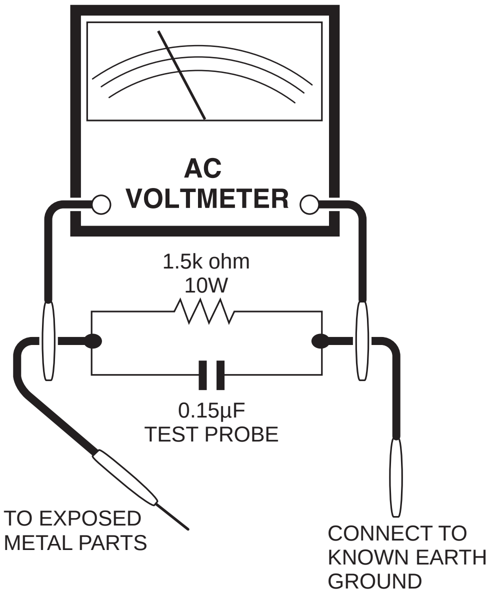
Before returning the receiver to the user, perform the following safety checks.

1. Inspect all lead dress to make certain that leads are not pinched or that hardware is not lodged between the chassis and other metal parts in the receiver.
2. Inspect all protective devices such as non-metallic control knobs, insulating materials, cabinet backs, adjustment and compartment covers or shields, isolation resistor-capacity networks, mechanical insulators, etc.
3. To be sure that no shock hazard exists, check for leakage current in the following manner.

- Plug the AC cord directly into a 120 volt AC outlet, (Do not use an isolation transformer for this test).
- Using two clip leads, connect a 1.5k ohm, 10 watt resistor paralleled by a 0.15µF capacitor in series with all exposed metal cabinet parts and a known earth ground, such as electrical conduit or electrical ground connected to earth ground.
- Use an AC voltmeter having with 5000 ohm per volt, or higher, sensitivity to measure the AC voltage drop across the resistor.
- Connect the resistor connection to all exposed metal parts having a return to the chassis (antenna, metal cabinet, screw heads, knobs and control shafts, escutcheon, etc.) and measure the AC voltage drop across the resistor.

  All checks must be repeated with the AC line cord plug connection reversed. (If necessary, a non-polarized adapter plug must be used only for the purpose of completing these check.)

  Any current measured must not exceed 0.5 milliamp. Any measurements not within the limits outlined above indicate of a potential shock hazard and corrective action must be taken before returning the instrument to the customer.



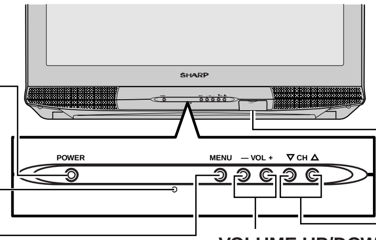
SAFETY NOTICE

Many electrical and mechanical parts in television receivers have special safety-related characteristics.
These characteristics are often not evident from visual inspection, nor can protection afforded by them be necessarily increased by using replacement components rated for higher voltage, wattage, etc.
Replacement parts which have these special safety characteristics are identified in this manual; electrical components having such features are identified by "⚠" and shaded areas in the Replacement Parts Lists and Schematic Diagrams.

For continued protection, replacement parts must be identical to those used in the original circuit. The use of substitute replacement parts which do not have the same safety characteristics as the factory recommended replacement parts shown in this service manual, may create shock, fire, X-radiation or other hazards.

LOCATION OF USER'S CONTROL

Front Panel



POWER
Press → On.
Press again → Off.

REMOTE CONTROL SENSOR

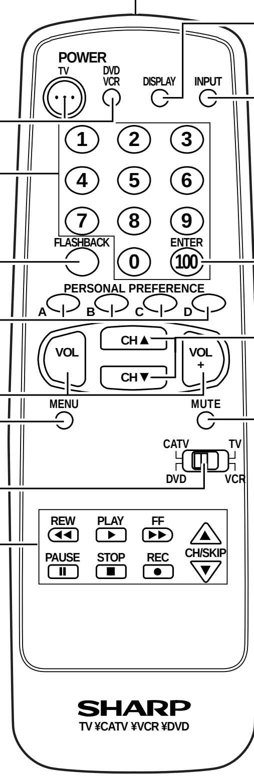
MENU
Press → Accesses MAIN MENU.
Press again → Exits MAIN MENU.

VIDEO/AUDIO IN 2 TERMINALS (INSIDE DOOR)

CHANNEL UP/DOWN
(▲) Selects next higher channel.
(▼) Selects next lower channel.

VOLUME UP/DOWN
(+) Increases sound.
(—) Decreases sound.

Basic Remote Control Functions



POWER
Press → On.
Press again → Off.

REMOTE KEYPAD
Accesses any channel from keypad.

FLASHBACK
Returns to previous channel.

PERSONAL PREFERENCE
With the Personal Preference buttons, you can program your favorite programs by using the 4 categories A, B, C and D. The channels can be accessed quickly by using these buttons.

VOLUME UP/DOWN
(+) Increases sound.
(−) Decreases sound.
• Changes or selects the TV adjustments on On-Screen Display.

MENU
Press → Accesses MAIN MENU.
Press again → Exits MAIN MENU.

CATV/DVD-TV/VCR MODE SELECT SWITCH
In TV/VCR position, signals sent will be for TV and VCR control.
In CATV/DVD position, signals sent will be for cable TV converter and DVD control.

DVD/VCR CONTROL

Infrared Transmitter Window

DISPLAY
Press → Displays receiving channel for 4 seconds.
Press again → Removes display.
• Temporarily displays receiving channel when in Closed Caption mode.

INPUT
Press → Switches to external video INPUT 1 mode.
Press twice → Switches to external video INPUT 2 mode.
Press 3 times → Switches to external video INPUT 3 mode or COMPONENT mode.
Press 4 times → Switches back to the original TV mode.

ENTER
Used in some instances where a Cable Converter Box requires an enter command after selecting channels, when using the REMOTE KEYPAD button.

CHANNEL UP/DOWN
(▲) Selects next higher channel.
(▼) Selects next lower channel.
• Moves the "●" mark on the MENU screens.

MUTE
Press → Mutes sound.
Press again → Restores sound.
• When sound is muted, CLOSED CAPTION appears if available.

Note:

- The above shaded buttons on the Remote Control glow in the dark. To use the glow-in-the-dark display on the remote control, place it under a fluorescent light or other lighting.
- The phosphorescent material contains no radioactive or toxic material, so it is safe to use.
- The degree of illumination will vary depending on the strength of lighting used.
- The degree of illumination will decrease with time and depending on the temperature.
- The time needed to charge the phosphorescent display will vary depending on the surrounding lighting.
- Sunlight and fluorescent lighting are the most effective when charging the display.

INSTALLATION AND SERVICE INSTRUCTIONS

Note: (1) When performing any adjustments to resistor controls and transformers use non-metallic screwdrivers or TV alignment tools.
(2) Before performing adjustments, the TV set must be on at least 15 minutes.

CIRCUIT PROTECTION

The receiver is protected by a 4.0A fuse (F701), mounted on PWB-A, wired into one side of the AC line input.

X-RADIATION PROTECTOR CIRCUIT TEST

After service has been performed on the horizontal deflection system, high voltage system, B+ system, test the X-Radiation protection circuit to ascertain proper operation as follows:

1. Apply 120V AC using a variac transformer for accurate input voltage.
2. Allow for warm up and adjust all customer controls for normal picture and sound.
3. Receive a good local channel.
4. Connect a digital voltmeter to TP653 (P651,Pin 3) and make sure that the voltmeter reads 13.7 ±0.6V DC.
5. Apply external 17.3V DC at TP653 by using an external DC supply, TV must be shut off.
6. To reset the protector, unplug the AC cord and plug the AC cord power on. Now make sure that normal picture appears on the screen.
7. If the operation of the horizontal oscillator does not stop in step 5, the circuit must be repaired before the set is returned to the customer.

HIGH VOLTAGE CHECK

High voltage is not adjustable but must be checked to verify that the receiver is operating within safe and efficient design limitations as specified checks should be as follows:

1. Connect an accurate high voltage meter between ground and anode of picture tube.
2. Operate receiver for at least 15 minutes at 120V AC line voltage, with a strong air signal or a properly tuned in test signal.
3. Enter the service mode and select the service adjustment "V11" and Bus data "01" (Y-mute on, CRT Cut Off).
4. The voltage should be below 35.0kV (at zero beam). If a correct reading cannot be obtained, check circuitry for malfunctioning components. After the voltage test, make Y-mute off to the normal mode.

For adjustments of this model, the bus data is converted to various analog signals by the D/A converter circuit.

Note: There are still a few analog adjustments in this series such as focus and master screen voltage. Follow the steps below whenever the service adjustment is required. See "Table-B" to determine, if service adjustments are required.

1. Service mode

Before putting unit into the service mode, check that customer adjustments are in the normal mode. Use the reset function in the video adjustment menu to ensure customer controls are in their proper (reset) position.

2. Service number selection

Once in the service mode, press the Ch-up or Ch-down button on the remote controller or at the set. The service adjustment number will vary in increments of one, from "V01" to "M05". Select the item you wish to adjust.

3. Data number selection

Press the Vol-up or Vol-down button to adjust the data number.

To enter the service mode and exit service mode.

To enter the service mode manually just press and hold the Vol-down and Ch-up buttons at the same time, plug the AC cord into a wall socket.
Now the TV set is switched on and enters the service mode.
To exit the service mode, turn the television off by pressing the power button.

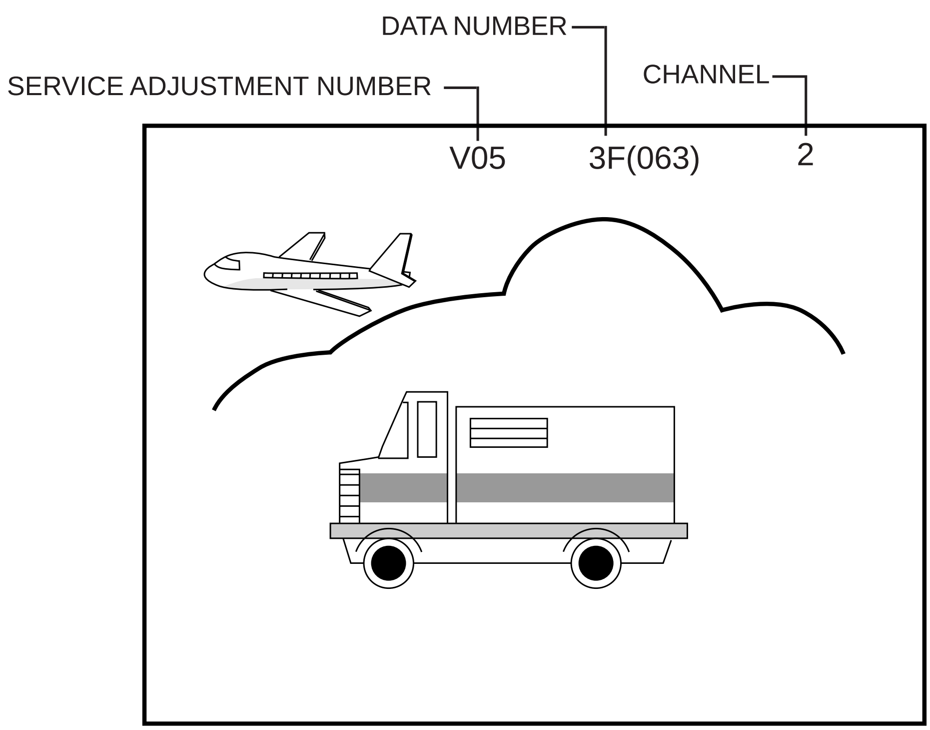


Figure A.

A. VCJ IC ADJUSTMENT

SERVICE NUMBER	ADJUSTMENT ITEM	DATA		NOTES	FIXED VALUE (HEX)
		RANGE	INITIAL VALUE		
V01	PICTURE	0-15 (00h-0Fh)	8 (08h)		
V02	TINT	0-127 (00h-7Fh)	66 (42h)		
V03	COLOR	0-127 (00h-7Fh)	56 (38h)		
V05	BRIGHT	0-127 (00h-7Fh)	64 (40h)		
V06	R CUT-OFF	64-255 (40h-FFh)	64 (40h)		
V07	G CUT-OFF	64-255 (40h-FFh)	64 (40h)		
V08	B CUT-OFF	64-255 (40h-FFh)	64 (40h)		
V09	G/R DRIVE	0-127 (00h-7Fh)	64 (40h)		
V10	B DRIVE	0-127 (00h-7Fh)	64 (40h)		
V11	Y-MUTE/V-STOP	0-2	0 (00h)	Y-Mute / Holizontal “—”	
V12	SHARP	0-63 (00h-3Fh)	50 (32h)		35
V13	DC RESTORATION	0-3 (00h-03h)	2 (02h)		02
V14	BLACK STRETCH	0-3 (00h-03h)	2 (02h)		02
V15	ABL START POINT	0-3 (00h-03h)	3 (03h)		03
V16	ABL GAIN	0-3 (00h-03h)	2 (02h)		02
V17	γ POINT	0-3 (00h-03h)	0 (00h)		00
V19	ENERGY SAVE	0-63 (00h-3Fh)	63 (3Fh)	Offset	3F
V24	LOW-G	0-255 (00h-FFh)	12 (0Ch)	Color Temp.	F4
V25	LOW-B	0-255 (00h-FFh)	241 (F1h)	Color Temp.	E6
V26	ML-G	0-255 (00h-FFh)	0 (00h)	Color Temp.	FD
V27	ML-B	0-255 (00h-FFh)	247 (F7h)	Color Temp.	F8
V28	HIGH-G	0-255 (00h-FFh)	2 (02h)	Color Temp.	01
V29	HIGH-B	0-255 (00h-FFh)	8 (08h)	Color Temp.	06
V30	WPL	0-1	1 (01h)		01
V31	RGB CONTRAST	0-63 (00h-3Fh)	59 (3Bh)		3B
V34	VSM GAIN	0-3 (00h-03h)	1 (01h)		01
V36	BPF/TOF-INPUT	0-1	0 (00h)	External Input	00
V37	CORING	0-1	0 (00h)		00
V38	VSM PHASE	0-1	0 (00h)		00
V39	COLOR γ	0-1	0 (00h)		00
V40	SHARP-INPUT	0-63 (00h-3Fh)	44 (2Ch)	External Input	2F
V41	TINT-INPUT	0-127 (00h-7Fh)	62 (3Eh)	External Input	3E
V42	PICTURE-COMPONENT	0-15 (00h-0Fh)	6 (06h)	Component Input	
V43	TINT-COMPONENT	0-127 (00h-7Fh)	62 (3Eh)	Component Input	3E
V44	COLOR-COMPONENT	0-127 (00h-7Fh)	72 (48h)	Component Input	48
V45	BRIGHT-COMPONENT	0-127 (00h-7Fh)	84 (54h)	Component Input	
V46	R CUT OFF-COMPONENT	64-255 (00h-FFh)	64 (40h)	Component Input	
V47	G CUT OFF-COMPONENT	64-255 (00h-FFh)	64 (40h)	Component Input	
V48	B CUT OFF-COMPONENT	64-255 (00h-FFh)	64 (40h)	Component Input	
V49	G/R DRIVE-COMPONENT	0-127 (00h-7Fh)	64 (40h)	Component Input	
V50	B DRIVE-COMPONENT	0-127 (00h-7Fh)	64 (40h)	Component Input	
V51	SHARP-COMPONENT	0-63 (00h-3Fh)	44 (2Ch)	Component Input	2F
V52	TINT-S	0-127 (00h-7Fh)	62 (3Eh)	Component Input	3E
V53	C-TRAP	0-1 (00h-01h)	0 (00h)		00
V59	AUTO FRESH	0-1 (00h-01h)	0 (00h)		00
V60	SHARP P F	0-1 (00h-01h)	1 (01h)		01
V61	CD MATRIX	0-3 (00h-03h)	2 (02h)		02
V62	B-Y ATT	0-1 (00h-01h)	0 (00h)		00
V63	R-Y ATT	0-1 (00h-01h)	0 (00h)		00
V64	CD MATRIX COMPONENT	0-3 (00h-03h)	0 (00h)	Component Input	00
V65	B-Y ATT-COMPONENT	0-1 (00h-01h)	0 (00h)	Component Input	00
V66	R-Y ATT-COMPONENT	0-1 (00h-01h)	0 (00h)	Component Input	00
V67	BUZZ	0-1 (00h-01h)	1 (01h)		01
V68	RGB ABCL	0-1 (00h-01h)	1 (01h)		01
V69	PICTURE-VCOMP	0-100 (00h-64h)	47 (2Fh)	16:9 Format (Offset)	2F
V70	COLOR-VCOMP	0-100 (00h-64h)	50 (32h)	16:9 Format (Offset)	32
V71	BRIGHT-VCOMP	0-100 (00h-64h)	51 (33h)	16:9 Format (Offset)	33
R01	RF-AGC	0-63 (00h-3Fh)	36 (24h)		
R03	RF-AGC REF	0-255 (00h-FFh)	170 (AAh)	Standard value for the self-adjustment	AA
D01	V POSITION	0-7 (00h-07h)	0 (00h)		00
D02	H POSITION	0-31 (00h-1Fh)	15 (0Fh)		
D03	V SIZE	0-127 (00h-7Fh)	89 (59h)		
D04	H SIZE	0-63 (00h-3Fh)	36 (24h)		
D05	V-LINEARITY	0-15 (00h-0Fh)	8 (08h)		
D06	V-S CORRECTION	0-15 (00h-0Fh)	12 (0Dh)		0D
D07	EW PARABOLA	0-63 (00h-3Fh)	43 (2Bh)		
D08	EW TRAPEZIUM	0-63 (00h-3Fh)	36 (24h)		
D10	AFC GAIN	0-3 (00h-03h)	2 (02h)		02
D11	V EHT	0-7 (00h-07h)	6 (06h)		06
D12	H EHT	0-7 (00h-07h)	6 (06h)		06
D13	EW CORNER	0-31 (00h-1Fh)	8(08h)		0B

SERVICE NUMBER	ADJUSTMENT ITEM	DATA		NOTES	FIXED VALUE (HEX)
		RANGE	INITIAL VALUE		
D14	EW CORNER BOTTOM	19-81 (13h-51h)	50 (32h)	Offset toward D13.	32
D15	NOISE DET LEVEL	0-3 (00h-03h)	0 (00h)		00
D18	V CENTERING	0-63 (00-3Fh)	36 (24h)		
D19	V-AGC	0-1 (00h-01h)	0 (00h)		00
D20	V POSITION-VCOMP	0-7 (00h-07h)	0 (00h)	16:9 Format	00
D21	H POSITION-VCOMP	0-31 (00h-1Fh)	15(0Fh)	16:9 Format	
D22	V SIZE-VCOMP	0-127 (00h-7Fh)	52(34h)	16:9 Format	
D23	H SIZE-VCOMP	0-63 (00h-3Fh)	36(24h)	16:9 Format	
D24	V-LINEARITY-VCOMP	0-15 (00h-0Fh)	8(08h)	16:9 Format	
D25	V-C CORRECTION-VCOMP	0-15 (00h-0Fh)	10(0Ah)	16:9 Format	0B
D26	EW PARABOLA-VCOMP	0-63 (00h-3Fh)	22(16h)	16:9 Format	
D27	EW TRAPEZIUM-VCOMP	0-63 (00h-3Fh)	35(23h)	16:9 Format	
D28	V EHT-VCOMP	0-7 (00h-07h)	6(06h)	16:9 Format	06
D29	H EHT-VCOMP	0-7 (00h-07h)	6(06h)	16:9 Format	06
D30	EW CORNER-VCOMP	0-31 (00h-1Fh)	12(0Ch)	16:9 Format	0C
D31	EW CORNER BOTTOM-VCOMP	19-81 (13h-51h)	50(32h)	Offset toward D30	32
D32	V BLK UPPER-VCOMP	0-3 (00h-03h)	2(02h)	16:9 Format	02
D33	V BLK LOWER-VCOMP	0-3 (00h-03h)	2(02h)	16:9 Format	02
D34	V CENTERING-VCOMP	0-63 (00h-3Fh)	36(24h)	16:9 Format	

B. SPECIAL SETTING

SERVICE NUMBER	ADJUSTMENT ITEM	DATA		NOTES	FIXED VALUE (HEX)
		RANGE	INITIAL VALUE		
EX1	FAO VOLUME	0-50 (00h-32h)	36 (24h)		24
EX2	CC-POSITION	0-127 (00h-7Fh)	27 (1Bh)		
EX3	INT	0-255 (00h-FFh)	122 (7Ah)	Interrupt period adjustment.	7A
EX4	A-ATT	0-127 (00h-7Fh)	90 (5Ah)		5A
EX5	TUNER data	0-3 (00h-03h)	0 (00h)		00
EX6	Think chip-Slice LEVEL	0-255 (00h-FFh)	54 (36h)		12
EX7	RLY DELAY TIME	0-255 (00h-FFh)	0 (00h)	For the power control	00
EX8	ADG ON TIME	0-255 (00h-FFh)	10 (0Ah)	For the power control	0A

C. OPTION SETTING

SERVICE NUMBER	ADJUSTMENT ITEM	DATA		NOTES	FIXED VALUE (HEX)
		RANGE	INITIAL VALUE		
OP1	OPTION1	0-255 (00h-FFh)	245 (F5h)		F5
OP2	OPTION2	0-255 (00h-FFh)	188 (BCh)		3C
OP3	OPTION3	0-255 (00h-FFh)	15 (0Fh)		8F

D. SOUND ADJUSTMENT

SERVICE NUMBER	ADJUSTMENT ITEM	DATA		NOTES	FIXED VALUE (HEX)
		RANGE	INITIAL VALUE		
M01	INPUT LEVEL	0-15 (00h-0Fh)	7 (07h)		
M02	MTS VCO	0-63 (00h-3Fh)	38 (26h)		
M03	FILTER	0-63 (00h-3Fh)	36 (24h)		
M04	WIDEBAND	0-63 (00h-3Fh)	28 (1Ch)		
M05	SPECTRAL	0-63 (00h-3Fh)	23 (17h)		

Holding down both the VOL-up and CH-up buttons on the TV set at service mode for more than 2 seconds will automatically write the above initial values into IC2101.

PART REPLACED	ADJUSTMENT		NOTES
	NECESSARY	UNNECESSARY	
IC2001		X	Data is stored in IC2101.
IC201	X		The adjustment is needed to compensate for characteristics of parts including IC201 and MTS level (M01).
IC2101	X		Holding down both the VOL-up and CH-up buttons on the TV set in the service mode for more than 2 seconds will automatically write the above initial values into IC2101 Then perform a complete adjustment.
CRT	X		Adjust items related to picture tube only.
IC3001	X		Adjust items related to MTS only (M01~M05).

SERVICE ADJUSTMENT

RF AGC Adjustment

1. Receive a good local channel.
2. Enter the service mode and select the service adjustment "R01".
3. Set the data value to point where no noise or beat appears.
4. Select another channel to confirm that no noise or beat appears.

   Note 1 : You will have to come out of the service mode to select another channel.

   Note 2 : Setting the data to "00" will produce a black raster.

Screen Adjustment

1. Receive a good local channel.
2. Enter the service mode and select the service adjustment "V03" and set the data value to "00" to set the color level to minimum. (Record original data code under adjustment "V03" before changing) You may skip this step, if you selected a B/W picture or monoscope pattern.
3. Select the service adjustment "V11" and adjust the data value to "01", this turn off the luminance signal (Y-mute).
4. Adjust the master screen control until the raster darkens to the point where raster is barely seen.
5. Adjust the service adjustments "V06" red, "V07" green and "V08" blue to obtain a good grey scale with normal whites at low brightness level.
6. Select the service adjustment "V11" and reset data to "00". Select the service adjustment "V03" and reset data to obtain normal color level.
7. For component input, the data value of "V46" red, "V47" green and "V48" blue is adjusted to follow the data value of "V06", "V07" and "V08" respectively.
8. Reset the master screen control to obtain normal brightness range.

White Balance Adjustment

1. Receive a good local channel.
2. Enter the service mode and select the service adjustment "V03" and set to "00" (minimum color)(Record original data code under adjustment "V03" before changing). "V03" does not have to be adjusted, if you selected a B/W picture or monoscope pattern.
3. Alternately adjust the service adjustment data of "V09" and "V10" until a good grey scale with normal whites is obtained. (RF Input)
4. For component input, the data value of "V49" and "V50" is adjusted to follow the data value of "V09" and "V10" respectively.
5. Select the service adjustment "V03" and reset data to obtain normal color level.

Sub-picture and Sub-Bright Adjustments

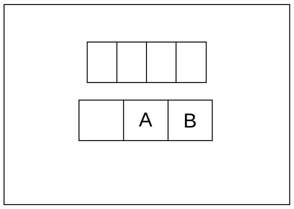
1. Receive the window pattern signal.

• RF INPUT (TU51)

2. Get into service adjustment data "V01" and "V05" and set the luminance as shown in figure "A" and "B" as below respectively.

• COMPONENT INPUT

3. Get in service adjustment data "V42" and "V45" and set the luminance as shown in figure "A" and "B" as below respectively.



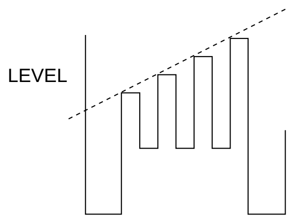
LUMINESCENCE CONFIRMATION

A: 95±10cd/m^2

B: 1.5±0.5cd/m^2

Sub-Tint Adjustment

1. Receive the half color bar signal.
• RF INPUT (TU51)
2. Get into Y-Mute by R/C, or by setting the "V11" bus data to "01".
3. Vary the "V02" bus data until the waveform becomes as stated below.



Sub-Color Adjustment

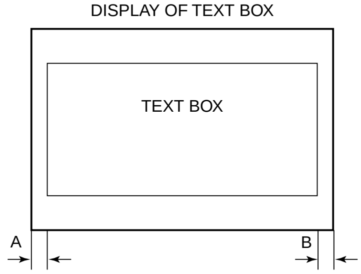
1. Receive a good local channel.
2. Make sure the customer color control is set to center position .
• RF INPUT (TU51)
3. Enter the service mode and select service adjustment "V03".
4. Adjust "V03" data value to obtain a normal color level.

Focus Adjustment

1. Receive a good local channel.
2. Adjust the FOCUS VR of the flyback transformer to make the image as fine as possible.

C. C Display Position Adjustment

1. Receive the lion head pattern signal.
2. Select "EX2" to display the text box.
3. Adjust the "EX2" bus data to let the text box displayed in the center.



SPEC INSPECTION:| A-B | / 2 ≦ 5mm

Vertical-Size and Linearity Adjustments

1. Receive a good local channel.

(SCREEN FORMAT 4:3)

2. Enter the service mode and select the service adjustment "D03" for V-size.
3. Adjust the "D03" bus data to get the proper V-size.
4. For V-linearity adjustment, select data bus "D05" and adjust to get the proper vertical linearity.

(SCREEN FORMAT 16:9 32F540 ONLY)

5. Input data of "D22" to mines 36 step from "D03" data. (V-SIZE)
6. Input data of "D24" same as "D05" data. (V-LIN)

Note: Aging for 10 min before adjustment. After the adjustment of V-center and V-size, re-adjustment for this V-line.

Vertical Phase Adjustment

(SCREEN FORMAT 4:3)

1. Enter the service mode and input data of “00h” on "D01".
2. Adjust "D18" data value so that picture is centered.

(SCREEN FORMAT 16:9 32F540 ONLY)

3. Input data of "00h" on "D20".
4. Input data of "D34" same as "D18" data.

Horizontal Position Adjustment

1. Receive a good local channel.

(SCREEN FORMAT 4:3)

2. Enter the service mode and select the service adjustment "D02".
3. Adjust "D02" data value so that picture is centered.

(SCREEN FORMAT 16:9 32F540 ONLY)

4. Input data of "D21" same as "D02" data.

Horizontal-Size Adjustment

1. Receive a good local channel.

(SCREEN FORMAT 4:3)

2. Enter the service mode and select the service adjustment "D04" for H-size.
3. Adjust the "D04" bus data to get the proper H-size.

(SCREEN FORMAT 16:9 32F540 ONLY)

4. Input data of "D23" same as "D04" data.

EW-Parabola

1. Receive a good local channel.

(SCREEN FORMAT 4:3)

2. Enter the service mode and select the service adjustment "D07" for EW parabola.
3. Adjust the "D07" bus data to get the proper vertical straight line for both left and right side.

(SCREEN FORMAT 16:9 32F540 ONLY)

4. Input data of "D26" to mines 19 step from "D07" data.

EW-Trapezium

1. Receive a good local channel.

(SCREEN FORMAT 4:3)

2. Enter the service mode and select the service adjustment "D08" for EW-Trapezium.
3. Adjust the "D08" bus data to get the best position display.

(SCREEN FORMAT 16:9 32F540 ONLY)

4. Input data of "D27" same as "D08" data.

MTS ADJUSTMENT

MTS Level Adjustment

1. Set the sound volume above 1.
   Monoral signal: 400Hz, 100% modulation
2. Confirm "EX4" data is "5Ah".
3. Vary the "M01" bus data until the voltage to pin (39) of IC3001 to become the value as stated below.
   SETTING VOLTAGE
   ADJ spec : 490±10mVrms
   CHK spec: 490±20mVrms

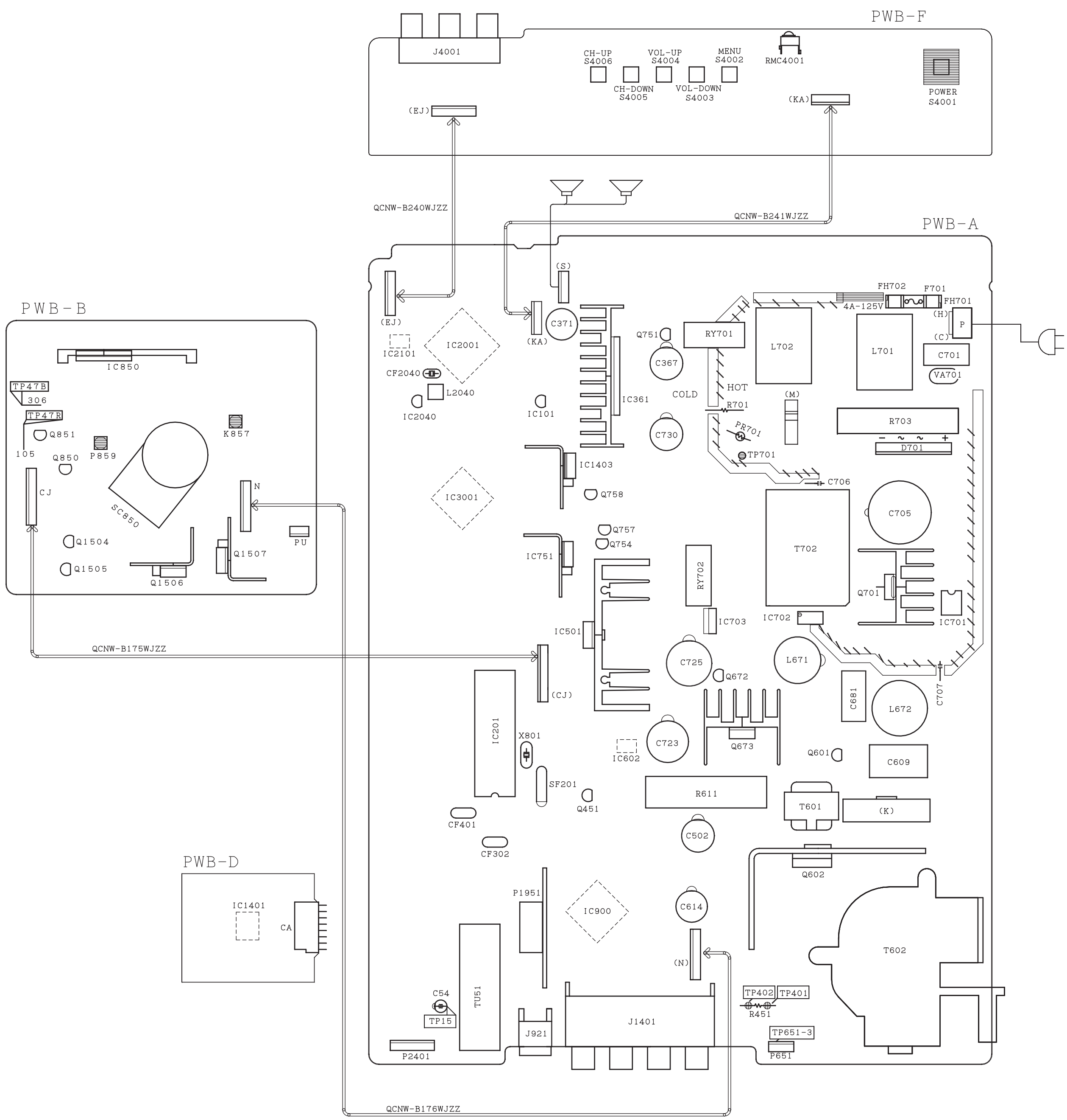
Separation Adjustment

1. Input "SIGNAL 1" and vary the "M04" bus data to get the minimun AC voltage to pin (39) of IC3001.
2. Input "SIGNAL 2" and vary the "M05" bus data to get the minimun AC voltage to pin (39) of IC3001.
   SIGNAL 1: 300Hz, 30% modulation, Lch only, NR-ON
   SIGNAL 2: 3kHz, 30% modulation, Lch only, NR-ON

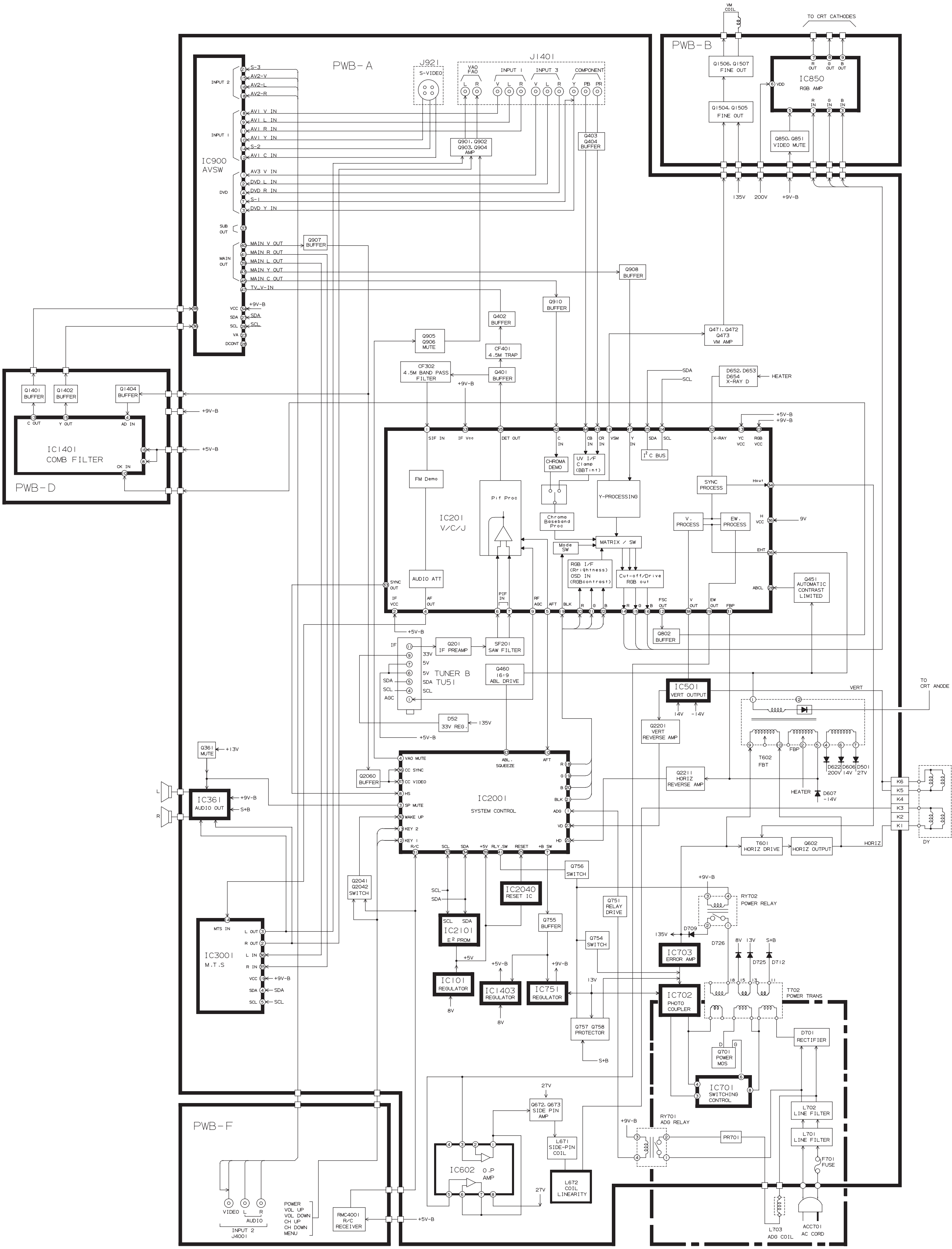
Note: SIGNAL 1 Adj. for widebando
SIGNAL 2 Adj. for spectral

Check the output of the speaker at the maximum volume as stated below.
Confirmation spec:
ADJ spec: above 25 dB
CHK spec: above 20 dB

CHASSIS LAYOUT



BLOCK DIAGRAM



DESCRIPTION OF SCHEMATIC DIAGRAM

NOTES:

1. The unit of resistance "ohm" is omitted.
(K=kΩ=1000Ω, M=MΩ)
2. All resistors are 1/16 watt, unless otherwise noted.
3. All capacitors are µ F, unless otherwise noted.
(P=pF=µµF)
4. (G) indicates ±2% tolerance may be used.
5. ⏚ indicates line isolated ground.

VOLTAGE MEASUREMENT CONDITIONS:

1. All DC voltages are measured with DVM connected between points indicated and chassis ground, line voltage set at 120V AC and all controls set for normal picture unless otherwise indicated.
2. All voltages measured with 1000µ V B & W or Color signal.

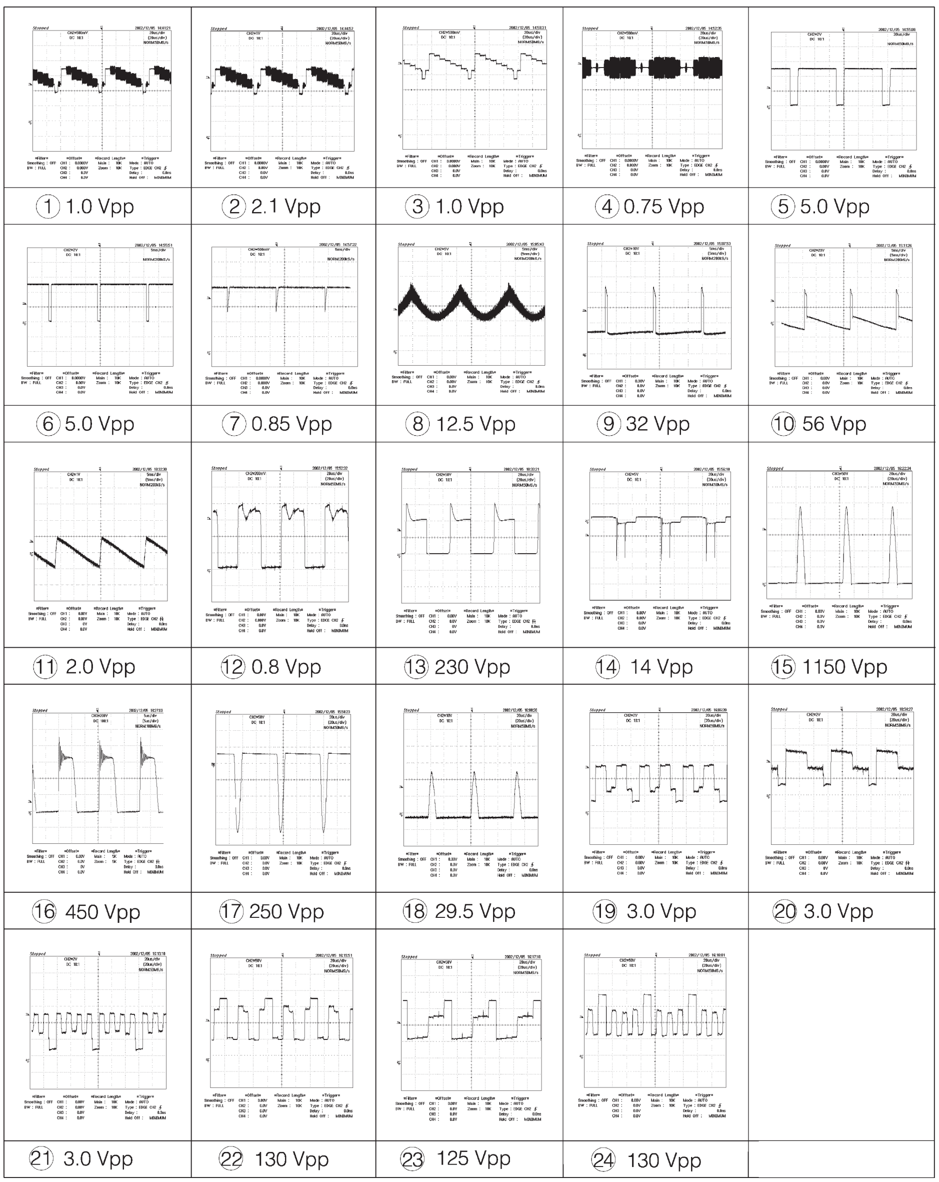
WAVEFORM MEASUREMENT CONDITIONS:

1. Photographs taken on a standard gated color bar signal, the tint setting adjusted for proper color. The wave shapes at the red, green and blue cathodes of the picture tube depend on the tint, color level and picture control.
2. ○▶ indicates waveform check points (See chart, waveforms are measured from point indicated to chassis ground.)

⚠ AND SHADED ( ) COMPONENTS
= SAFETY RELATED PARTS.
▲ MARK= X-RAY RELATED PARTS.

This circuit diagram is a standard one, printed circuits may be subject to change for product improvement without prior notice.

WAVEFORMS

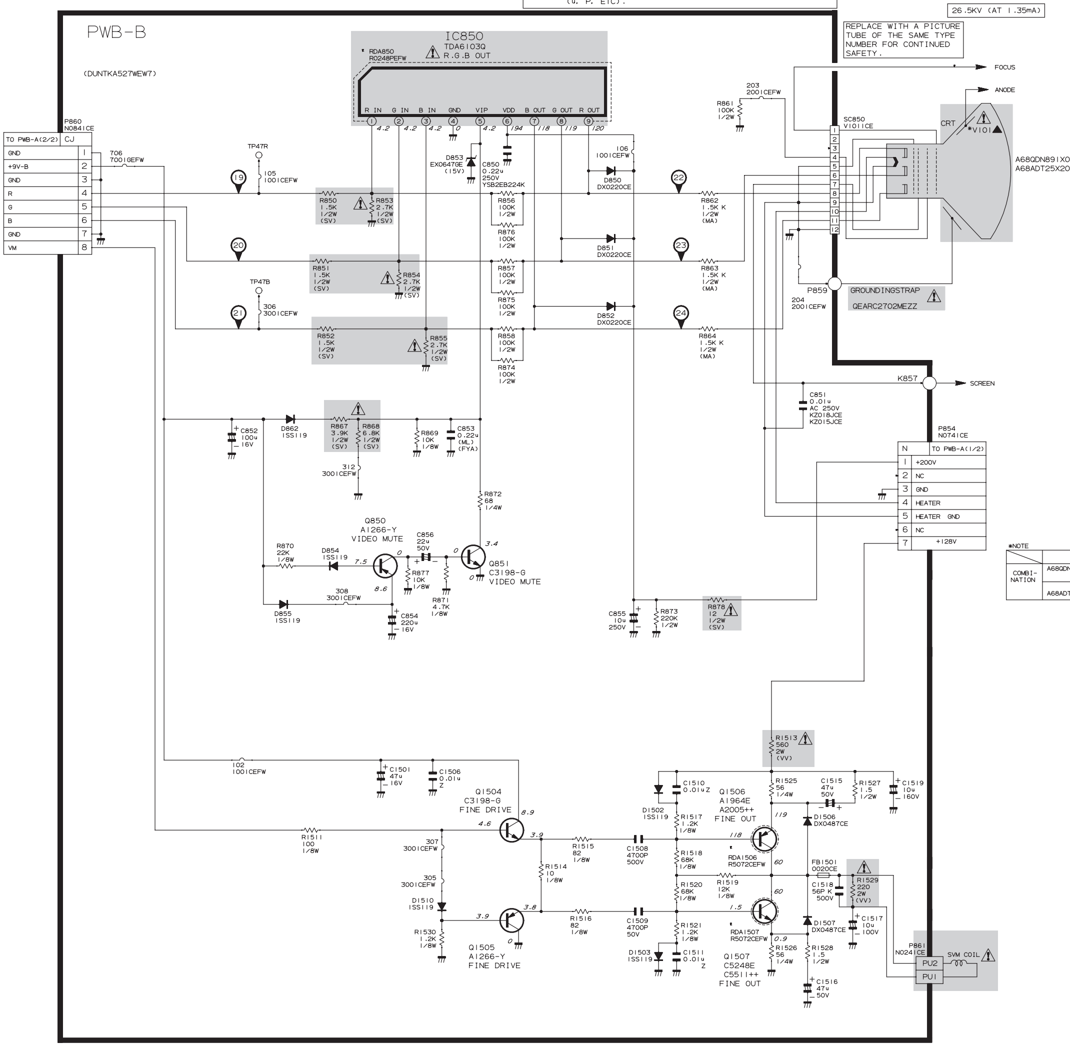


SCHEMATIC DIAGRAMS

CRT UNIT

⚠ AND SHADED ( ) COMPONENTS = SAFETY RELATED PARTS.
▲ MARK = X-RAY RELATED PARTS.

NOTE: 1. THE UNIT OF RESISTANCE "OHM" IS OMITTED (K=1000 OHMS, M=MEGAOHM).
2. THE UNIT OF ALL CAPACITORS ARE F WITH PREFIX SYMBOL (u, P, ETC).



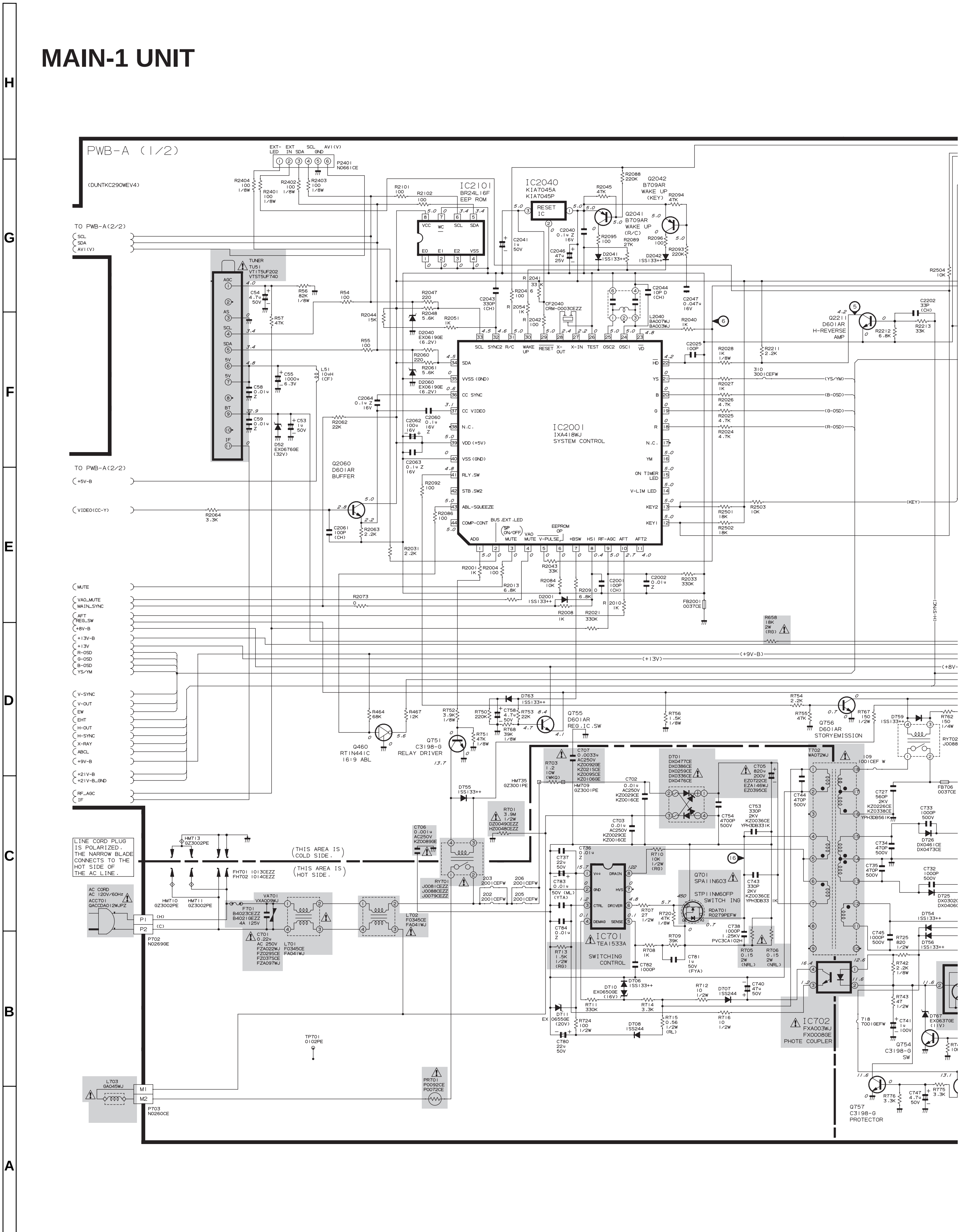
*NOTE

	CRT	DY	R621	R622	C609	C610
COMBI-NATION	A68QDN891X001(6E)	DSE-2812FA	2.7/1W	JUMPER	14000P	330P
	A68ADT25X20	68T1FSV	1.2/2W	0.18/1W	13500P	—

H G F E D C B A

1 2 3 4 5 6

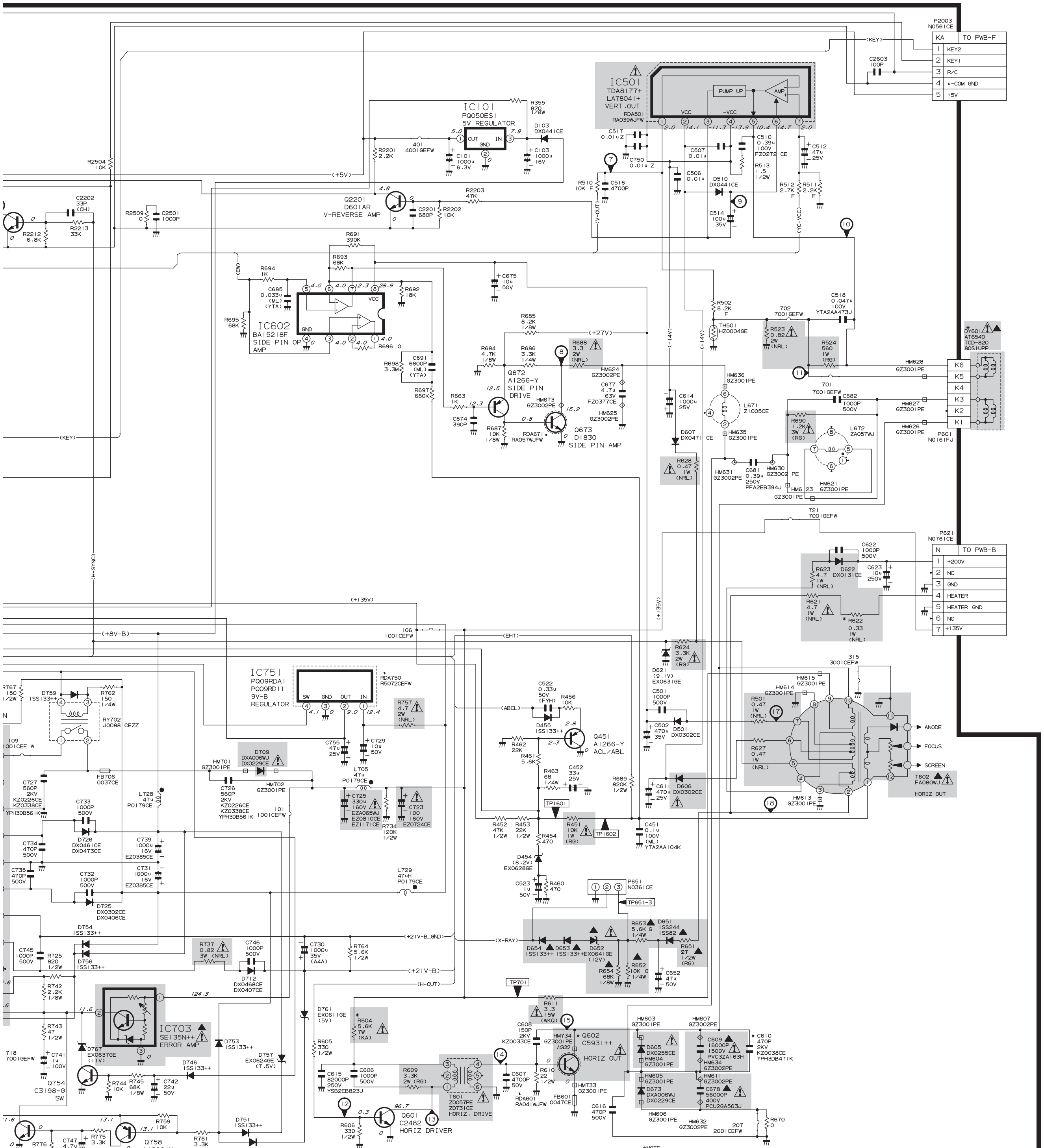
MAIN-1 UNIT



1	2	3	4	5	6	7	8	9	10

⚠ AND SHADED ( ) COMPONENTS = SAFETY RELATED PARTS.
▲ MARK = X-RAY RELATED PARTS.

NOTE: 1. THE UNIT OF RESISTANCE "OHM" IS OMITTED (K=1000 OHMS, M=MEGAOHM).
2. ALL RESISTORS ARE 1/16 WATT, UNLESS OTHERWISE NOTED.
3. UNIT OF ALL CAPACITORS ARE F WITH PREFIX SYMBOL (u, P, ETC).

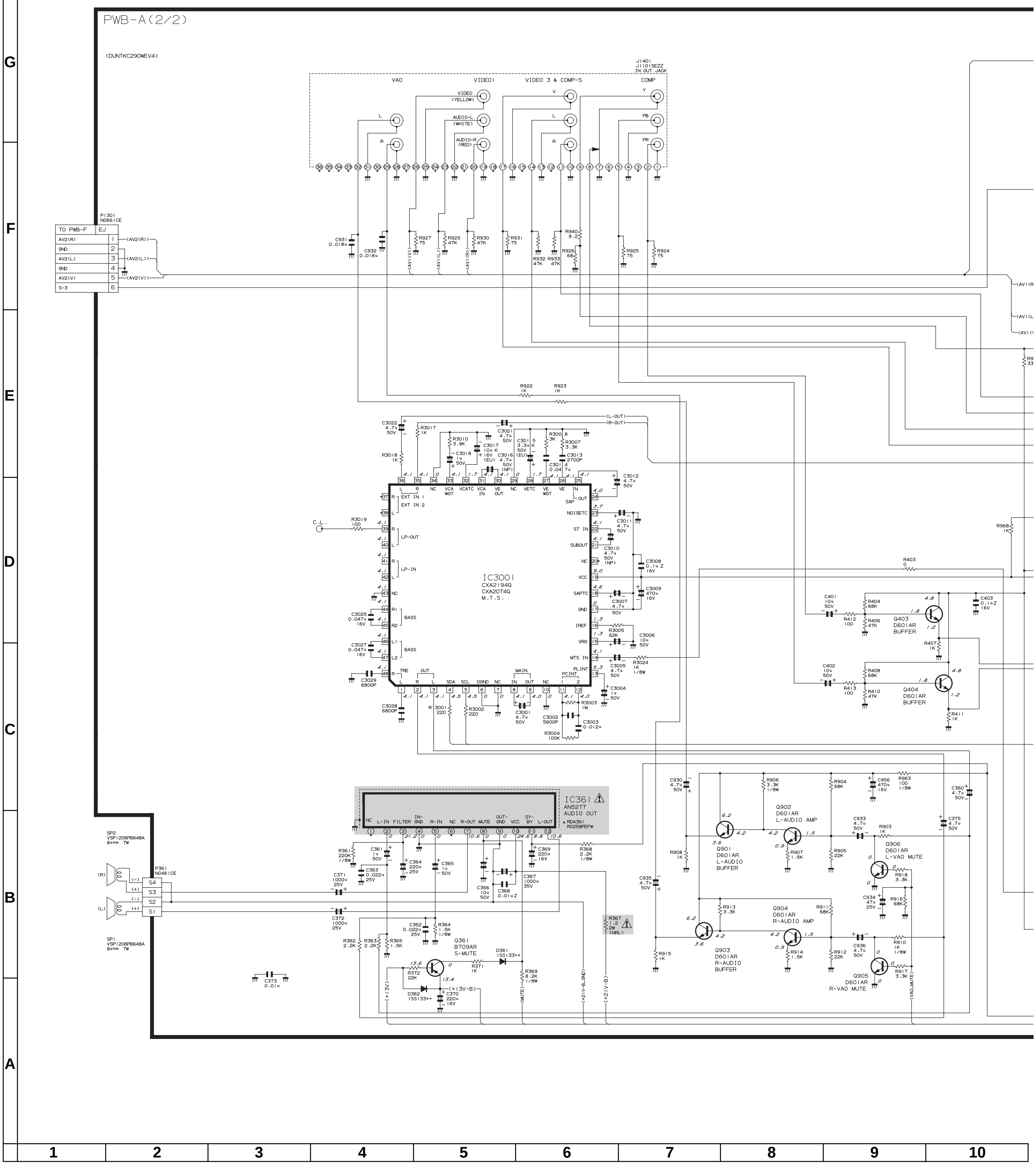


*NOTE

	CRT	DY	L671	L672	C610	C609	C681	C678	R692	R523	R621	R622	R604
COMBI-NATION	A80AKS90X02	TCD-820	Z1005CEZZ	ZA057WJ	470P	16000P	0.39u	56000P	18K	0.82/2W	4.7/1W	0.33/1W	5.6K/7W
	A80ALB20X06	80S1UPP	Z1005CEZZ	ZA062WJ	270P	17000P	0.51u	56000P	15K	0.68/2W	1.5/2W	0.47/1W	4.7K/7W
	A80ERF082X13L	AT6540	Z1053CEN2 Z1053CEZZ	ZA062WJ	—	15000P	0.33u	30000P	15K	0.82/2W	4.7/1W	JUMPER	5.6K/7W

10	11	12	13	14	15	16	17	18	19

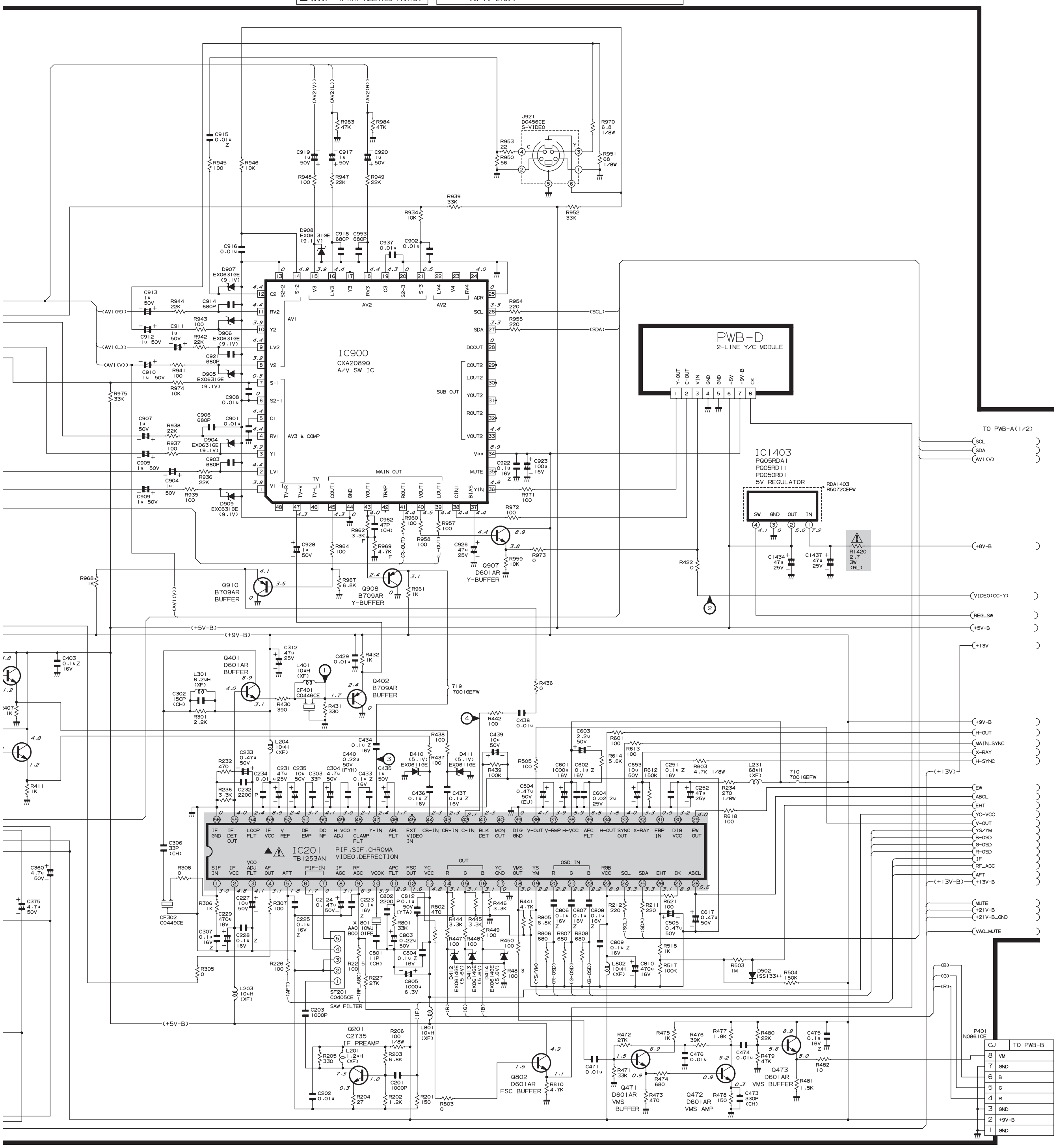
MAIN-2 UNIT



PWB-A(2/2)
(DUNTKC290WEV4)
J1401
J1101SEZZ
IN OUT JACK
VAO
VIDEO1
VIDEO 3 & COMP-S
COMP
VIDEO (YELLOW)
AUDIO-L (WHITE)
AUDIO-R (RED)
P1301
N0661CE
TO PWB-F
EJ
AV2(R)
GND
AV2(L)
GND
AV2(V)
S-3
IC3001
CXA2194Q
CXA2074Q
M.T.S.
IC361
AN5277
AUDIO OUT
RDA361
R0258PEFW
Q361
BT09AR
S-MUTE
Q901
D601AR
L-AUDIO
BUFFER
Q902
D601AR
L-AUDIO AMP
Q903
D601AR
R-AUDIO
BUFFER
Q904
D601AR
R-AUDIO AMP
Q905
D601AR
R-VAO MUTE
Q906
D601AR
L-VAO MUTE
Q403
D601AR
BUFFER
Q404
D601AR
BUFFER
SP2
VSP1206PB648A
8ohm 7W
SP1
VSP1206PB648A
8ohm 7W
P361
N0461CE
(+13V)
(MUTE)
(+21V-GND)
(+21V-B)
(VAO_MUTE)
(L-OUT)
(R-OUT)
C.L.
H
G
F
E
D
C
B
A
1
2
3
4
5
6
7
8
9
10

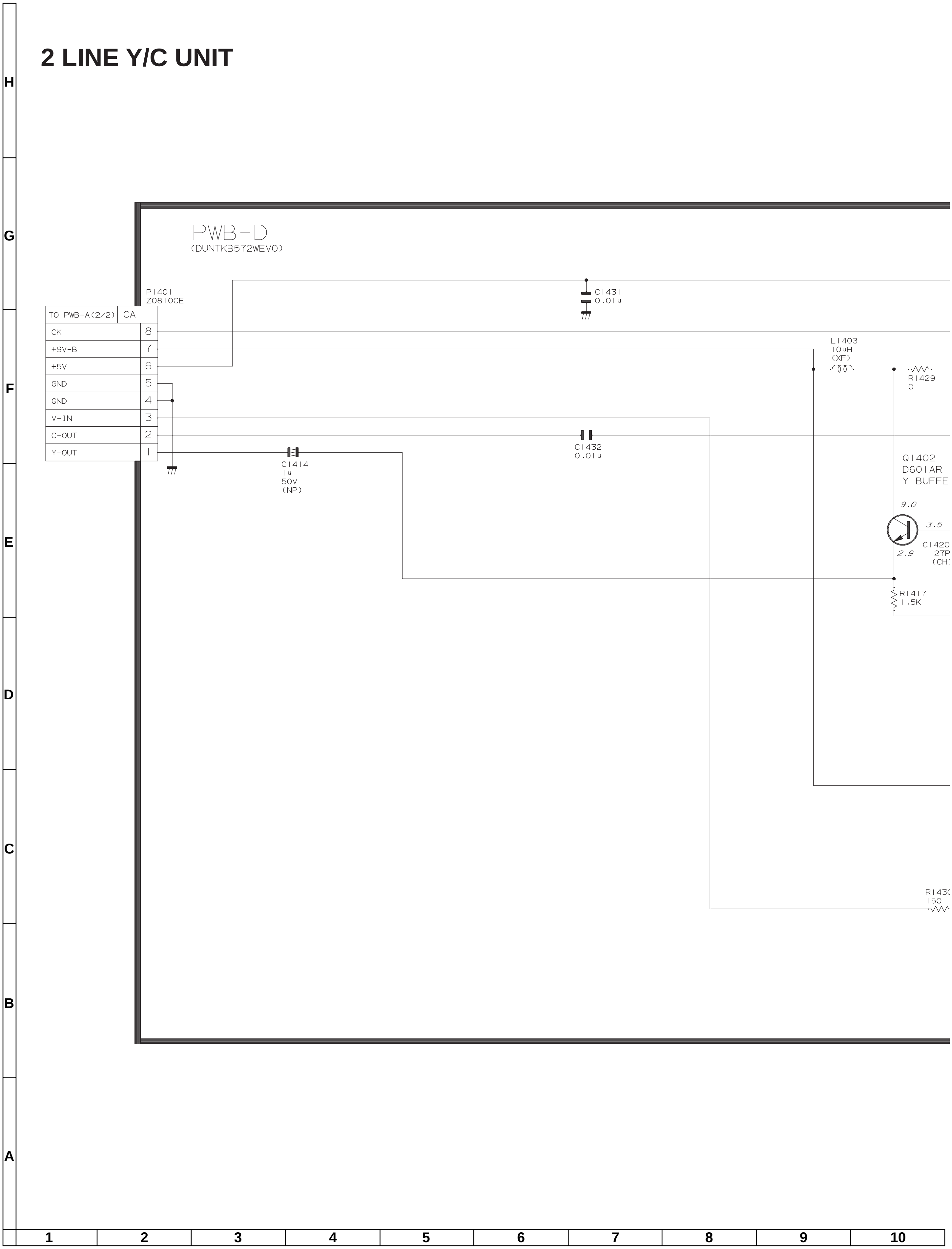
⚠ AND SHADED( )COMPONENTS = SAFETY RELATED PARTS.
▲ MARK = X-RAY RELATED PARTS.

NOTE: 1.THE UNIT OF RESISTANCE "OHM" IS OMITTED (K=1000 OHMS, M=MEGAOHM).
2.ALL RESISTORS ARE 1/16 WATT UNLESS OTHERWISE NOTED.
3.UNIT OF ALL CAPACITORS ARE F WITH PREFIX SYMBOL (u, P, ETC).

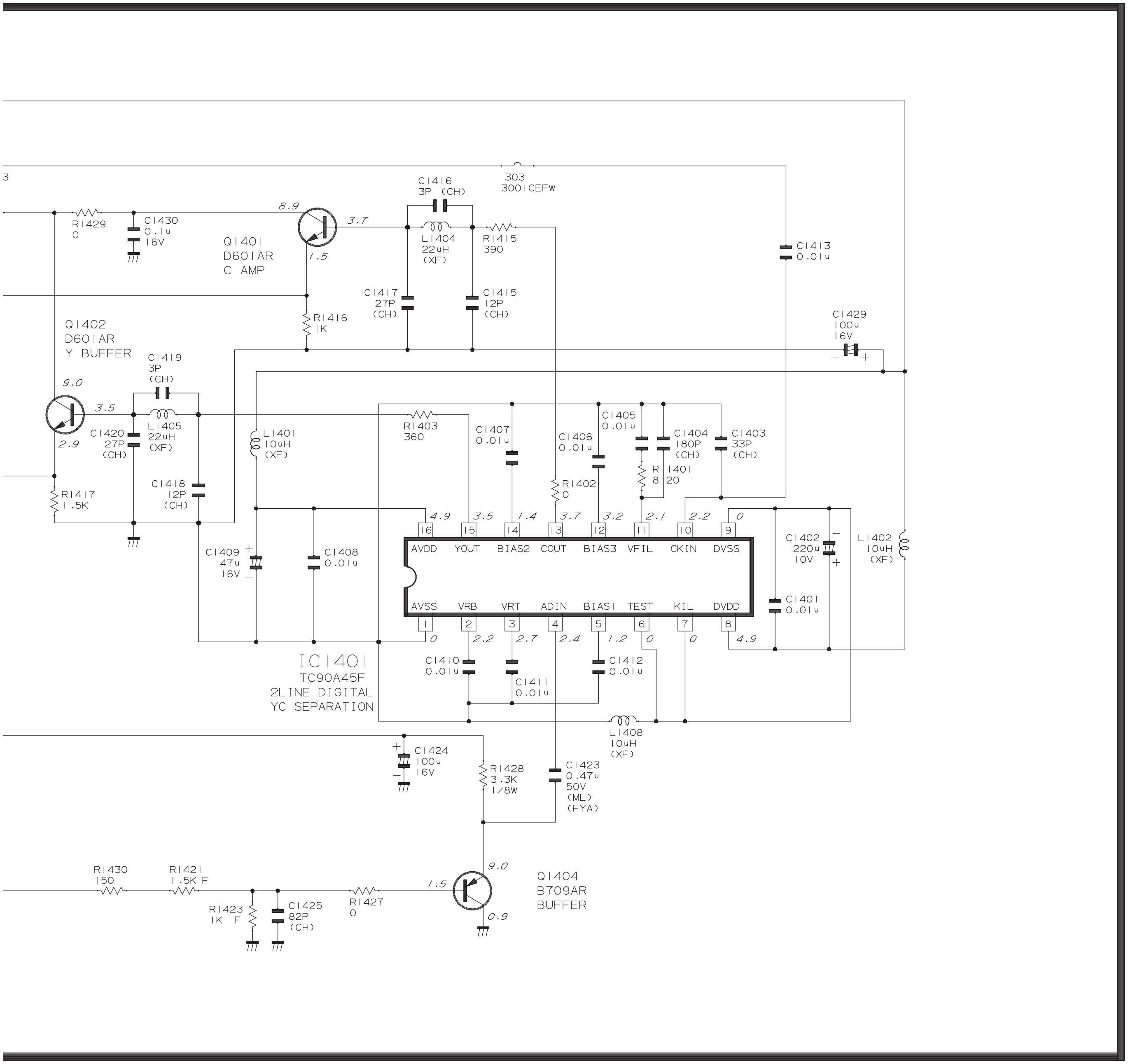


10	11	12	13	14	15	16	17	18	19

2 LINE Y/C UNIT

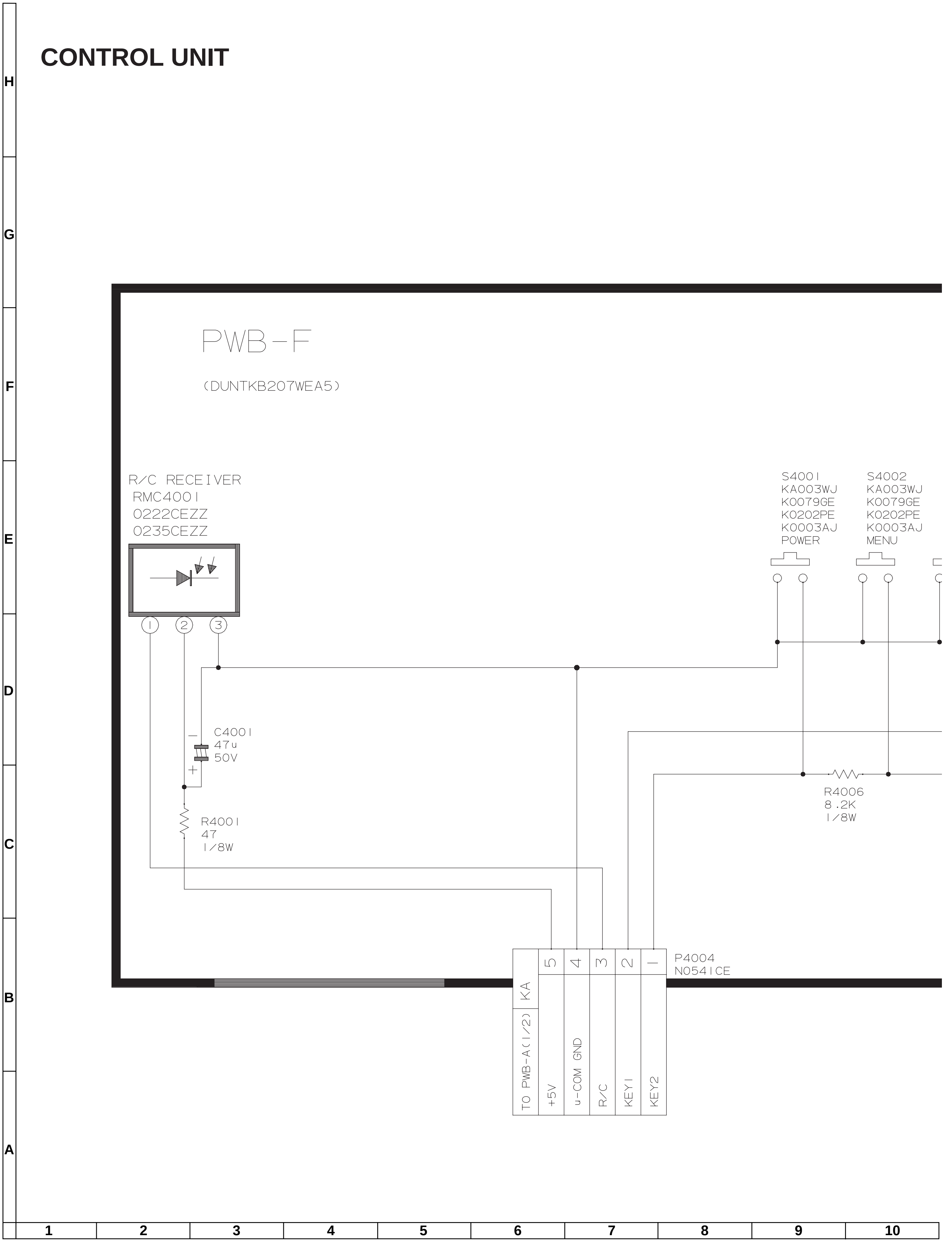


NOTE: 1.THE UNIT OF RESISTANCE "OHM" IS OMITTED
(K=1000 OHMS, M=MEGAOHM).
2.ALL RESISTORS ARE 1/16 WATT UNLESS OTHERWISE NOTED.
3.UNIT OF ALL CAPACITORS ARE F WITH PREFIX SYMBOL
(u, P, ETC).

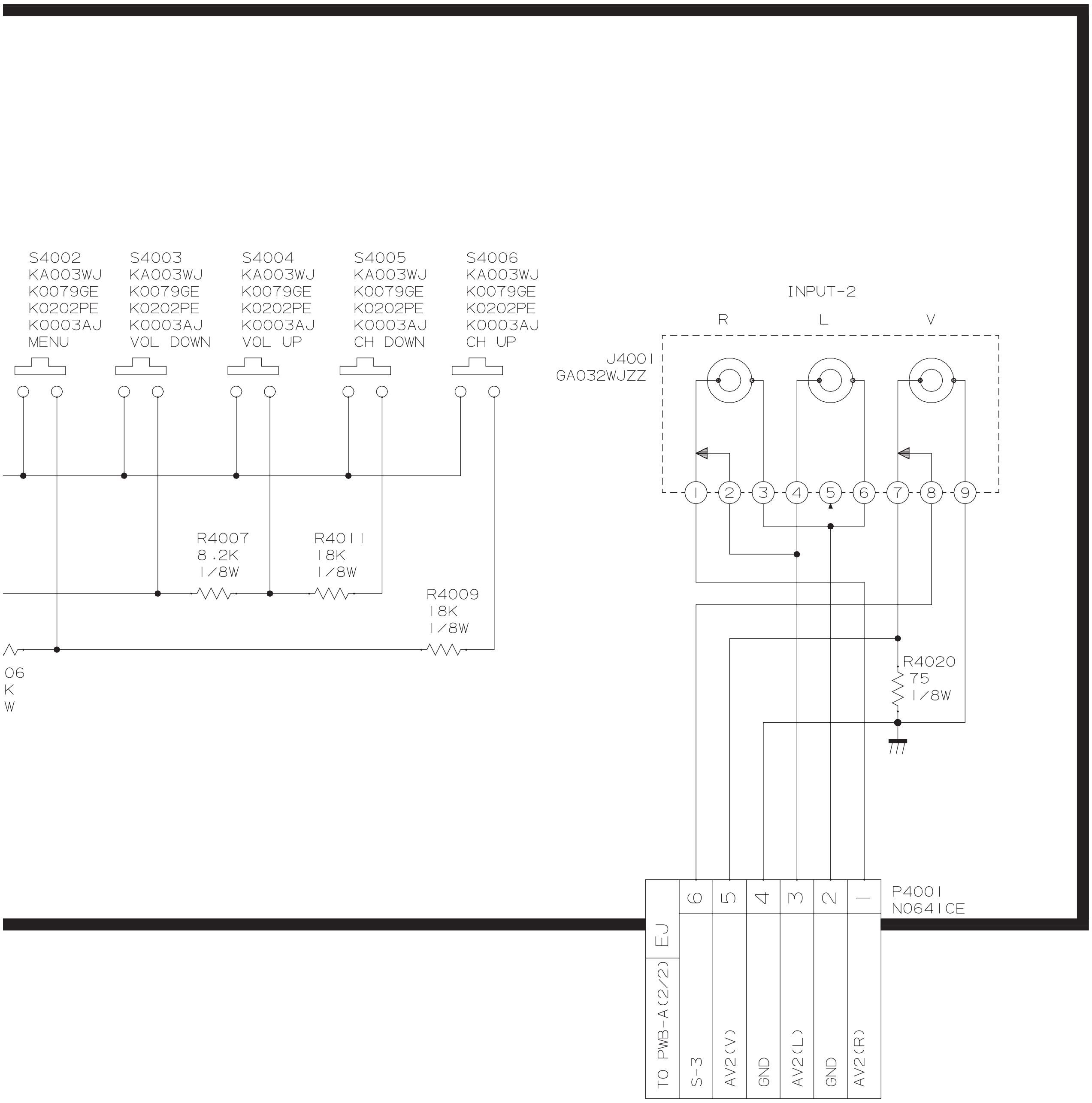


10	11	12	13	14	15	16	17	18	19

CONTROL UNIT

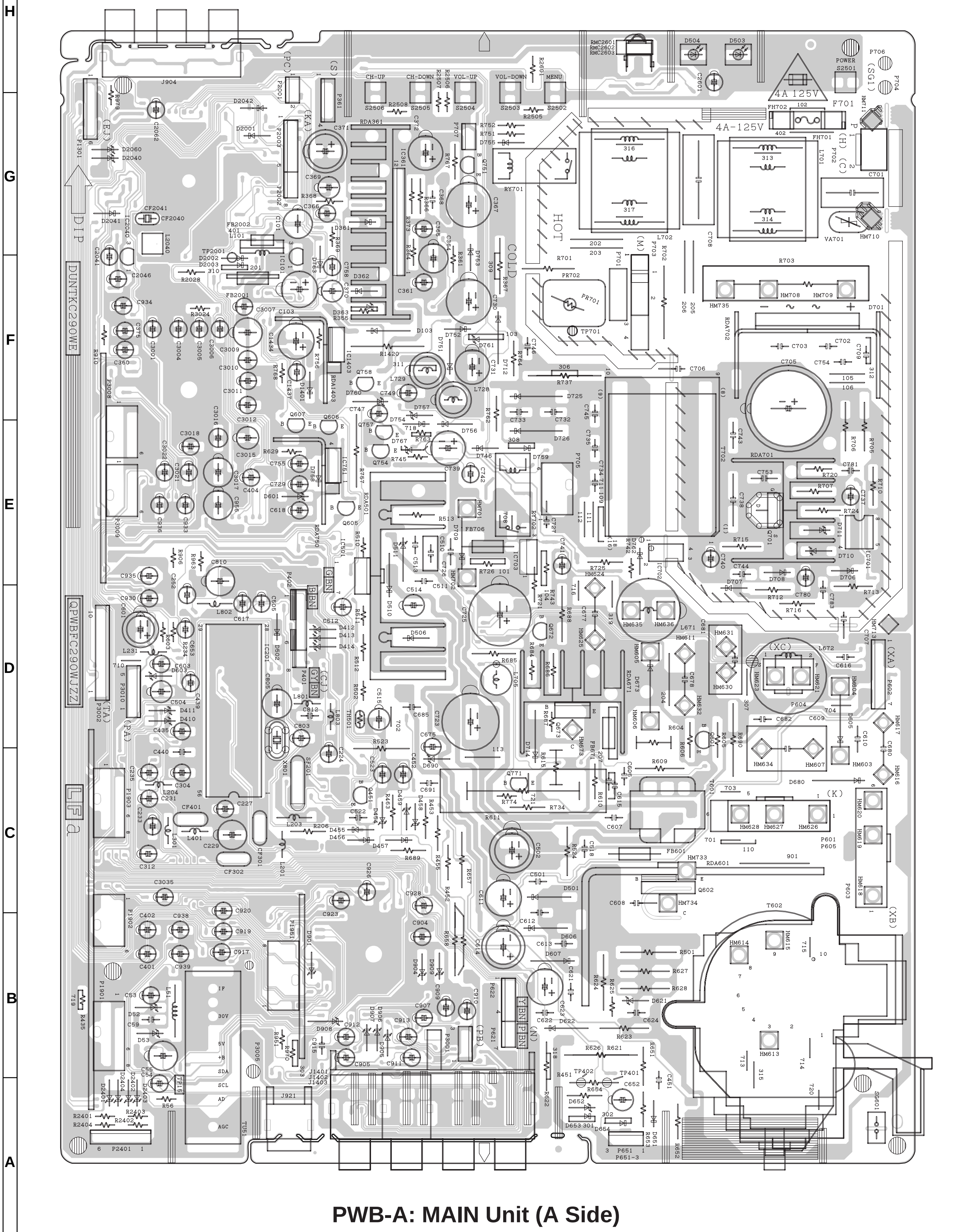


NOTE: 1.THE UNIT OF RESISTANCE "OHM" IS OMITTED
(K=1000 OHMS, M=MEGAOHM).
2.THE UNIT OF ALL CAPACITORS ARE F WITH PREFIX SYMBOL
(u, P, ETC).



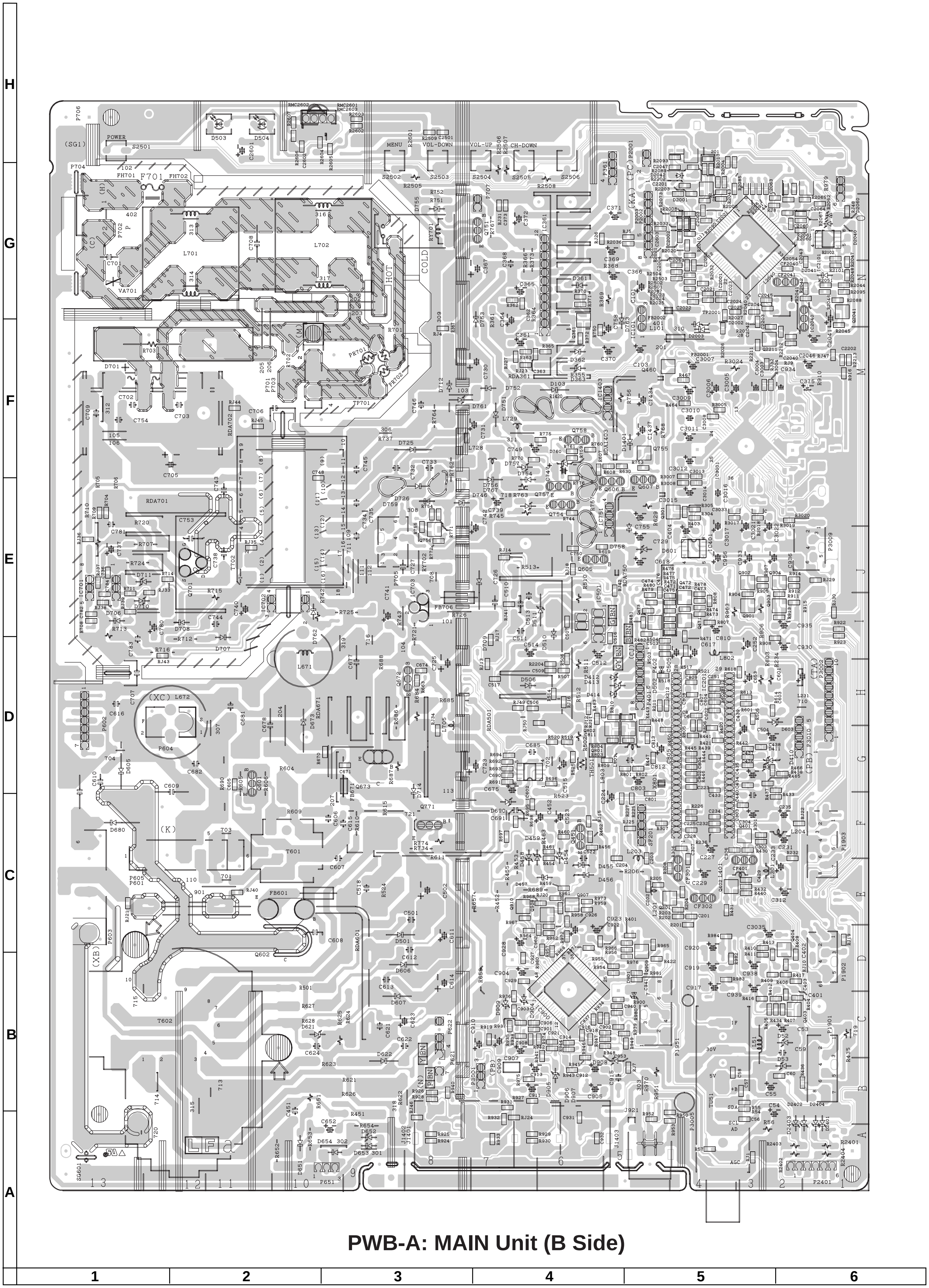
10	11	12	13	14	15	16	17	18	19

PRINTED WIRING BOARD ASSEMBLIES



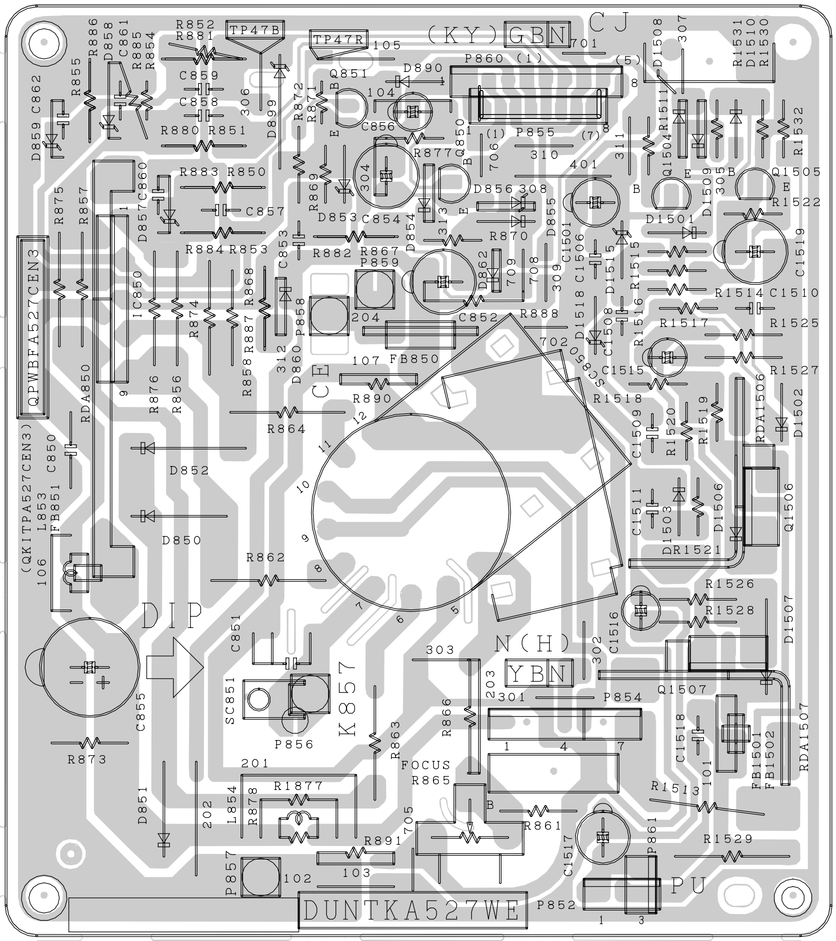
PWB-A: MAIN Unit (A Side)

1	2	3	4	5	6

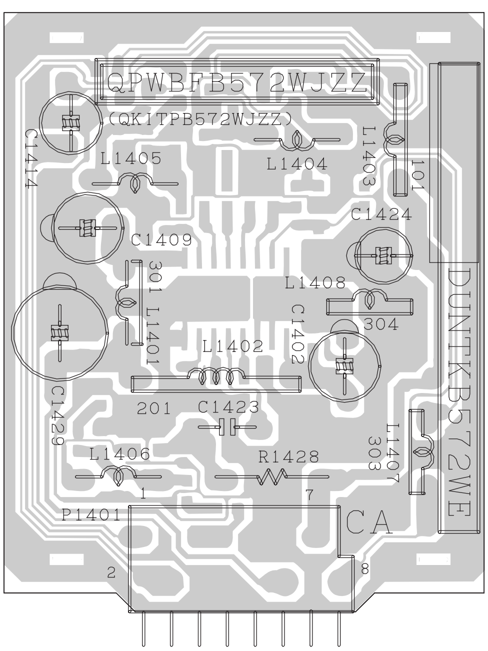


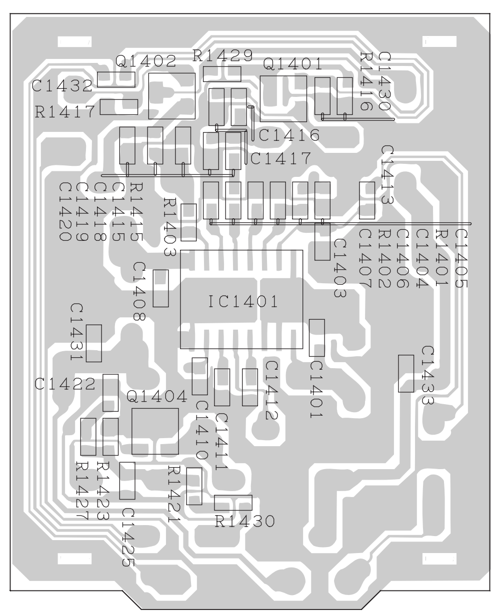
PWB-A: MAIN Unit (B Side)

H
G
F
E
D
C
B
A



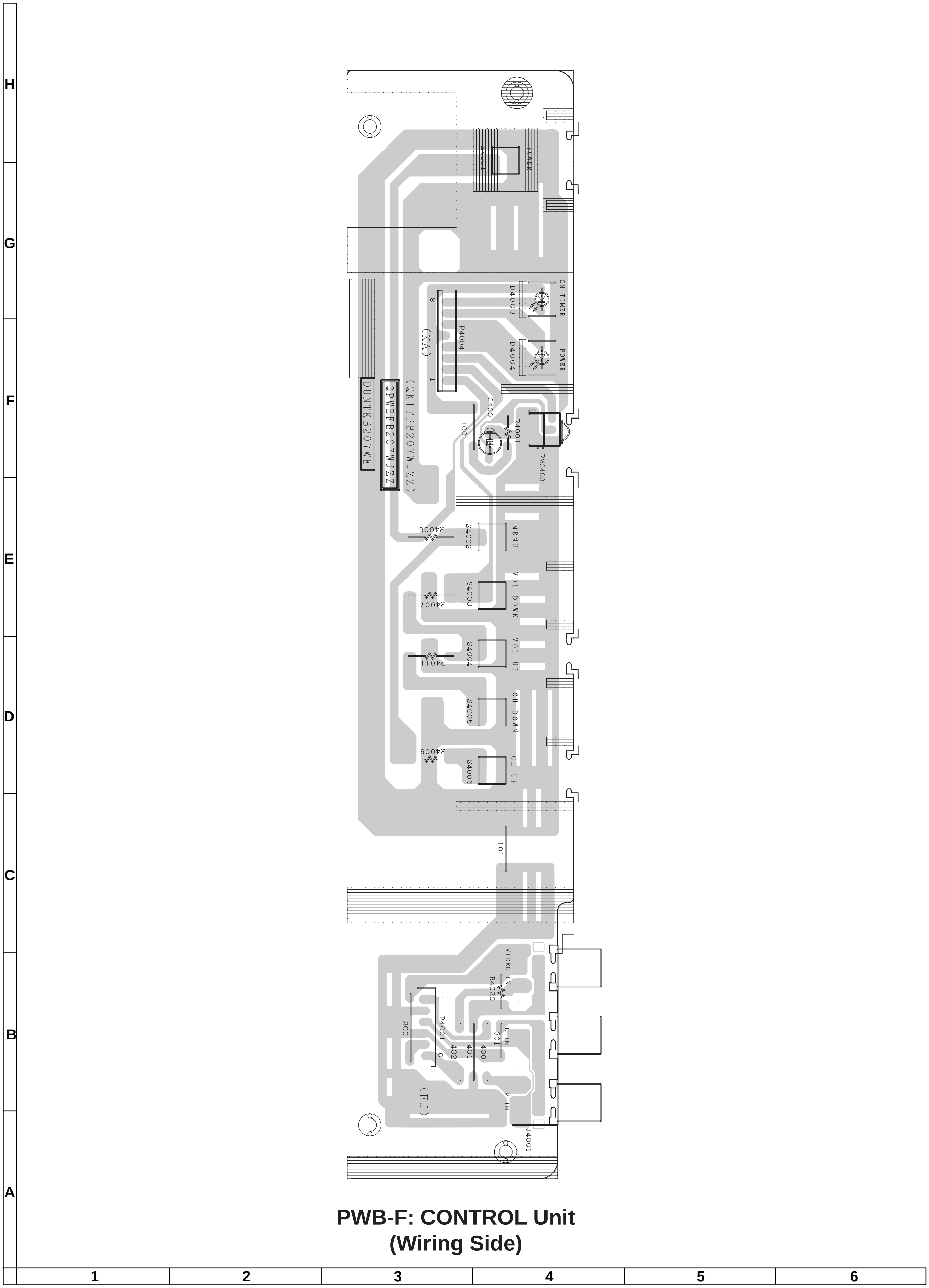
PWB-B: CRT Unit (Wiring Side)





PWB-D: 2 LINE Y/C Unit (Wiring Side) **PWB-D: 2 LINE Y/C Unit (Chip Parts Side)**

1	2	3	4	5	6



PWB-F: CONTROL Unit (Wiring Side)

PARTS LIST

PARTS REPLACEMENT

Replacement parts which have these special safety characteristics identified in this manual ; electrical components having such features are identified by ⚠ and shaded areas in the Replacement Parts Lists and Schematic Diagrams. The use of a substitute replacement part which does no have the same safety characteristic as the factory recommended replacement parts shown in this service manual may create shock, fire or other hazards.

"HOW TO ORDER REPLACEMENT PARTS"

To have your order filled promptly and correctly, please furnish the following informations.

1. MODEL NUMBER
2. REF. NO.
3. PART NO.
4. DESCRIPTION

in **USA**: Contact your nearest SHARP Parts Distributor to order. For location of SHARP Parts Distributor, Please call Toll-Free; 1-800-BE-SHARP

★ MARK: SPARE PARTS-DELIVERY SECTION

▲ MARK: X-RAY RELATED PARTS

PICTURE TUBE

Ref. No.	Part No.	★	Description	Code
▲⚠ V101	VB80AKS90X+1E	X	Picture Tube	CR
⚠ L703	RCiLGA045WJZZ	X	Degaussing Coil	AM
⚠	QEARCA006WJZZ	X	Ground-Part	AD

PRINTED WIRING BOARD ASSEMBLIES *(NOT REPLACEMENT ITEM)*

Ref. No.	Part No.	★	Description	Code
PWB-A	DUNTKC290WEV4	–	MAIN Unit	—
PWB-B	DUNTKA527WEW7	–	CRT Unit	—
PWB-D	DUNTKB572WEV0	–	2 LINE Y/C Unit	—
PWB-F	DUNTKB207WEA5	–	CONTROL Unit	—

DUNTKC290WEV4 PWB-A MAIN UNIT

TUNER

NOTE: THE PARTS HERES SHOWN ARE SUPPLIED AS AN ASSEMBLY NOT INDEPENDENTLY

Ref. No.	Part No.	★	Description	Code
⚠ TU51	VTUVT1T5UF202	X	VHF Tuner	AP

INTEGRATED CIRCUITS

Ref. No.	Part No.	★	Description	Code
IC101	VHiPQ050ES1-1+	X	PQ050ES1MXP	AB
▲⚠ IC201	VHiTB1253AN-1	X	TB1253AN	AP
⚠ IC361	VHiAN5277//-1	X	AN5277	AG
⚠ IC501	VHiTDA8177+-1	X	TDA8177	AE
IC602	VHiBA15218F2EY	X	BA15218F-E2	AB
⚠ IC701	VHiTEA1533A-1	X	TEA1533AP	AE
⚠ IC702	RH-FXA003WJZZ	X	PC123Y82	AB
▲⚠ IC703	VHiSE135N++-F	X	SE135N	AD
IC751	VHiPQ09RDA1-1	X	PQ090RDA1SZ	AD
IC900	VHiCXA2089Q-2Y	X	CXA2089Q-6T	AK
IC1403	VHiPQ05RDA1-1	X	PQ050RDA1SZ	AD
IC2001	RH-iXA418WJZZQ	X	TMP88CS38BFG	AN
IC2040	VHiKiA7045A-1+	X	KIA7045AP	AB
IC2101	VHiBR24L16F-1Y	X	BR24L16F-WE2	AC
IC3001	VHiCXA2194Q-1Y	X	CXA2194Q/-T6	AP

TRANSISTORS

Ref. No.	Part No.	★	Description	Code
Q201	VS2SC2735//1EY	X	2SC2735	AB
Q361	VS2SB709AR/-1Y	X	2SB709AR	AB
Q401	VS2SD601AR/-1Y	X	2SD601AR	AB
Q402	VS2SB709AR/-1Y	X	2SB709AR	AB
Q403	VS2SD601AR/-1Y	X	2SD601AR	AB
Q404	VS2SD601AR/-1Y	X	2SD601AR	AB
Q451	VS2SA1266-Y-1+	X	2SA1266-Y	AB
Q460	VSRT1N441C/-1Y	X	RT1N441C	AB
Q471	VS2SD601AR/-1Y	X	2SD601AR	AB
Q472	VS2SD601AR/-1Y	X	2SD601AR	AB
Q473	VS2SD601AR/-1Y	X	2SD601AR	AB
Q601	VS2SC2482//-1+	X	2SC2482	AB
⚠ Q602	VS2SC5931++-F	X	2SC5931++	AG
Q672	VS2SA1266-Y-1+	X	2SA1266-Y	AB
Q673	VS2SD1830//1E	X	2SD1830	AD
⚠ Q701	VSSPA11N603-1	X	SPA11N603	AK
Q751	VS2SC3198-G-1+	X	2SC3198-G	AB
Q754	VS2SC3198-G-1+	X	2SC3198-G	AB
Q755	VS2SD601AR/-1Y	X	2SD601AR	AB
Q756	VS2SD601AR/-1Y	X	2SD601AR	AB
Q757	VS2SC3198-G-1+	X	2SC3198-G	AB
Q758	VS2SA1266-Y-1+	X	2SA1266-Y	AB
Q802	VS2SD601AR/-1Y	X	2SD601AR	AB
Q901	VS2SD601AR/-1Y	X	2SD601AR	AB
Q902	VS2SD601AR/-1Y	X	2SD601AR	AB
Q903	VS2SD601AR/-1Y	X	2SD601AR	AB
Q904	VS2SD601AR/-1Y	X	2SD601AR	AB
Q905	VS2SD601AR/-1Y	X	2SD601AR	AB
Q906	VS2SD601AR/-1Y	X	2SD601AR	AB
Q907	VS2SD601AR/-1Y	X	2SD601AR	AB
Q908	VS2SB709AR/-1Y	X	2SB709AR	AB
Q910	VS2SB709AR/-1Y	X	2SB709AR	AB
Q2041	VS2SB709AR/-1Y	X	2SB709AR	AB
Q2042	VS2SB709AR/-1Y	X	2SB709AR	AB
Q2060	VS2SD601AR/-1Y	X	2SD601AR	AB
Q2201	VS2SD601AR/-1Y	X	2SD601AR	AB
Q2211	VS2SD601AR/-1Y	X	2SD601AR	AB

DIODES

Ref. No.	Part No.	★	Description	Code
D52	RH-EX0676GEZZY	X	Zener Diode, 32V	AB
D103	RH-DX0441CEZZY	X	DX0441CE	AB
D361	VHD1SS133++-1Y	X	1SS133++	AA
D362	VHD1SS133++-1Y	X	1SS133++	AA
D410	RH-EX0611GEZZY	X	Zener Diode, 5.1V	AB
D411	RH-EX0611GEZZY	X	Zener Diode, 5.1V	AB
D412	RH-EX0614GEZZY	X	Zener Diode, 5.6V	AB
D413	RH-EX0614GEZZY	X	Zener Diode, 5.6V	AB
D414	RH-EX0614GEZZY	X	Zener Diode, 5.6V	AB
D454	RH-EX0628GEZZY	X	Zener Diode, 8.2V	AB

Ref. No.	Part No.	★	Description	Code
D455	VHD1SS133++-1Y	X	1SS133++	AA
D501	RH-DX0302CEZZY	X	DX0302CE	AB
D502	VHD1SS133++-1Y	X	1SS133++	AA
D510	RH-DX0441CEZZY	X	DX0441CE	AB
⚠ D605	RH-DX0255CEZZ	X	DX0255CE	AD
⚠ D606	RH-DX0302CEZZY	X	DX0302CE	AB
D607	RH-DX0471CEZZY	X	DX0471CE	AB
D621	RH-EX0631GEZZY	X	Zener Diode, 9.1V	AB
⚠ D622	RH-DX0131CEZZY	X	DX0131CE	AB
▲ ⚠ D651	VHD1SS244//-1Y	X	1SS244	AB
▲ ⚠ D652	RH-EX0641GEZZY	X	Zener Diode, 12V	AB
▲ ⚠ D653	VHD1SS133++-1Y	X	1SS133++	AA
▲ ⚠ D654	VHD1SS133++-1Y	X	1SS133++	AA
⚠ D673	RH-DXA006WJZZ	X	DXA006WJ	AB
⚠ D701	RH-DX0477CEZZ	X	DX0477CE	AD
D706	VHD1SS133++-1Y	X	1SS133++	AA
D707	VHD1SS244//-1Y	X	1SS244	AB
D708	VHD1SS244//-1Y	X	1SS244	AB
⚠ D709	RH-DXA006WJZZ	X	DXA006WJ	AB
D710	RH-EX0650GEZZY	X	Zener Diode, 16V	AB
D711	RH-EX0655GEZZY	X	Zener Diode, 20V	AB
D712	RH-DX0468CEZZ	X	DX0468CE	AB
D725	RH-DX0302CEZZY	X	DX0302CE	AB
D726	RH-DX0461CEZZ	X	DX0461CE	AB
D746	VHD1SS133++-1Y	X	1SS133++	AA
D751	VHD1SS133++-1Y	X	1SS133++	AA
D752	VHD1SS133++-1Y	X	1SS133++	AA
D753	VHD1SS133++-1Y	X	1SS133++	AA
D754	VHD1SS133++-1Y	X	1SS133++	AA
D755	VHD1SS133++-1Y	X	1SS133++	AA
D756	VHD1SS133++-1Y	X	1SS133++	AA
D757	RH-EX0624GEZZY	X	Zener Diode, 7.5V	AB
D759	VHD1SS133++-1Y	X	1SS133++	AA
D761	RH-EX0611GEZZY	X	Zener Diode, 5V	AB
D763	VHD1SS133++-1Y	X	1SS133++	AA
D767	RH-EX0637GEZZY	X	Zener Diode, 11V	AB
D904	RH-EX0631GEZZY	X	Zener Diode, 9.1V	AB
D905	RH-EX0631GEZZY	X	Zener Diode, 9.1V	AB
D906	RH-EX0631GEZZY	X	Zener Diode, 9.1V	AB
D907	RH-EX0631GEZZY	X	Zener Diode, 9.1V	AB
D908	RH-EX0631GEZZY	X	Zener Diode, 9.1V	AB
D909	RH-EX0631GEZZY	X	Zener Diode, 9.1V	AB
D2001	VHD1SS133++-1Y	X	1SS133++	AA
D2040	RH-EX0619GEZZY	X	Zener Diode, 6.2V	AB
D2041	VHD1SS133++-1Y	X	1SS133++	AA
D2042	VHD1SS133++-1Y	X	1SS133++	AA
D2060	RH-EX0619GEZZY	X	Zener Diode, 6.2V	AB
TH501	RH-HZ0004GEZZ+	X	Thermistor	AB
⚠ VA701	RH-VXA009WJZZ	X	Varistor	AB

PACKAGED CIRCUITS

Ref. No.	Part No.	★	Description	Code
⚠ PR701	RMPTP0092CEZZ	X	Packaged Circuit	AD
⚠ R701	RR-DZ0049CEZZY	X	Resistor	AB
X801	RCRSAA010WJZZ	X	Crystal	AC

FILTERS

Ref. No.	Part No.	★	Description	Code
CF302	RFiLC0449CEZZ+	X	Filter	AB
CF401	RFiLC0446CEZZ+	X	Filter	AB
SF201	RFiLC0405CEZZ	X	Filter	AD

COILS

Ref. No.	Part No.	★	Description	Code
L51	VP-CF100K0000Y	X	Peaking, 10µH	AB
L201	VP-XF1R2K0000Y	X	Peaking, 1.2µH	AB
L203	VP-XF100K0000Y	X	Peaking, 10µH	AB
L204	VP-XF100K0000Y	X	Peaking, 10µH	AB
L231	VP-XF680K0000Y	X	Peaking, 68µH	AB
L301	VP-XF8R2K0000Y	X	Peaking, 8.2µH	AB
L401	VP-XF100K0000Y	X	Peaking, 10µH	AB
L671	RCiLZ1005CEZZ	X	Coil	AD
L672	RCiLZA057WJZZ	X	Coil	AE
⚠ L701	RCiLF0345CEZZ	X	Coil	AC
⚠ L702	RCiLF0345CEZZ	X	Coil	AC
L705	RCiLP0179CEZZ+	X	Coil	AB
L728	RCiLP0179CEZZ+	X	Coil	AB
L729	RCiLP0179CEZZ+	X	Coil	AB
L801	VP-XF100K0000Y	X	Peaking, 10µH	AB
L802	VP-XF100K0000Y	X	Peaking, 10µH	AB
L2040	RCiLBA007WJZZ	X	Oscillation Coil	AB

TRANSFORMERS

Ref. No.	Part No.	★	Description	Code
⚠ T601	RTRNZ0057PEZZ	X	Transformer	AD
▲ ⚠ T602	RTRNFA080WJZZ	X	H-Volt Transformer	AT
⚠ T702	RTRNWA072WJZZ	X	Transformer	AH

CAPACITORS

Ref. No.	Part No.	★	Description			Code
C53	VCEA0A1HW105M+	X	1	50V	Electrolytic	AB
C54	VCEA0A1HW475M+	X	4.7	50V	Electrolytic	AB
C55	VCEA0A0JW108M+	X	1000	6.3V	Electrolytic	AB
C58	VCKYCY1HF103ZY	X	0.01	50V	Ceramic	AA
C59	VCKYPA1HF103Z+	X	0.01	50V	Ceramic	AA
C101	VCEA0A0JW108M+	X	1000	6.3V	Electrolytic	AB
C103	VCEA0A1CW108M+	X	1000	16V	Electrolytic	AB
C201	VCKYCY1HB102KY	X	1000p	50V	Ceramic	AA
C202	VCKYCY1HB103KY	X	0.01	50V	Ceramic	AA
C203	VCKYCY1HB102KY	X	1000p	50V	Ceramic	AA
C223	VCKYCY1CF104ZY	X	0.1	16V	Ceramic	AA
C224	VCEA0A1HW474M+	X	0.47	50V	Electrolytic	AB
C225	VCKYCY1CF104ZY	X	0.1	16V	Ceramic	AA
C227	VCEA0A1HW106M+	X	10	50V	Electrolytic	AB
C228	VCKYCY1CF104ZY	X	0.1	16V	Ceramic	AA
C229	VCEA0A1CW477M+	X	470	16V	Electrolytic	AB
C231	VCEA0A1EW476M+	X	47	25V	Electrolytic	AB
C232	VCKYCY1HB222KY	X	2200p	50V	Ceramic	AA
C233	VCEA0A1HW474M+	X	0.47	50V	Electrolytic	AB
C234	VCKYCY1HB103KY	X	0.01	50V	Ceramic	AA
C235	VCEA0A1HW106M+	X	10	50V	Electrolytic	AB
C251	VCKYCY1CF104ZY	X	0.1	16V	Ceramic	AA
C252	VCEA0A1EW476M+	X	47	25V	Electrolytic	AB
C302	VCCCCY1HH151JY	X	150p	50V	Ceramic	AA
C303	VCCCCY1HH330JY	X	33p	50V	Ceramic	AA
C304	VCEA0A1HW475M+	X	4.7	50V	Electrolytic	AB
C306	VCCCCY1HH330JY	X	33p	50V	Ceramic	AA
C307	VCKYCY1CF104ZY	X	0.1	16V	Ceramic	AA
C312	VCEA0A1EW476M+	X	47	25V	Electrolytic	AB
C360	VCEA0A1HW475M+	X	4.7	50V	Electrolytic	AB
C361	VCEA0A1HW105M+	X	1	50V	Electrolytic	AB
C362	VCKYCY1EB223KY	X	0.022	25V	Ceramic	AA
C363	VCKYCY1EB223KY	X	0.022	25V	Ceramic	AA
C364	VCEA0A1EW227M+	X	220	25V	Electrolytic	AB
C365	VCEA0A1HW105M+	X	1	50V	Electrolytic	AB
C366	VCEA0A1HW106M+	X	10	50V	Electrolytic	AB
C367	VCEA0A1VW108M+	X	1000	35V	Electrolytic	AB
C368	VCKYPA1HF103Z+	X	0.01	50V	Ceramic	AA
C369	VCEA0A1CW227M+	X	220	16V	Electrolytic	AB
C370	VCEA0A1CW227M+	X	220	16V	Electrolytic	AB
C371	VCEA0A1EW108M+	X	1000	25V	Electrolytic	AB
C372	VCEA0A1EW108M+	X	1000	25V	Electrolytic	AB
C373	VCKYCY1HB103KY	X	0.01	50V	Ceramic	AA
C375	VCEA0A1HW475M+	X	4.7	50V	Electrolytic	AB
C401	VCEA0A1HW106M+	X	10	50V	Electrolytic	AB
C402	VCEA0A1HW106M+	X	10	50V	Electrolytic	AB
C403	VCKYCY1CF104ZY	X	0.1	16V	Ceramic	AA
C429	VCKYCY1HB103KY	X	0.01	50V	Ceramic	AA
C433	VCKYCY1CF104ZY	X	0.1	16V	Ceramic	AA
C434	VCKYCY1CF104ZY	X	0.1	16V	Ceramic	AA
C435	VCEA0A1HW105M+	X	1	50V	Electrolytic	AB
C436	VCKYCY1CF104ZY	X	0.1	16V	Ceramic	AA
C437	VCKYCY1CF104ZY	X	0.1	16V	Ceramic	AA
C438	VCKYCY1HB103KY	X	0.01	50V	Ceramic	AA
C439	VCEA0A1HW106M+	X	10	50V	Electrolytic	AB
C440	VCFYFA1HA224J+	X	0.22	50V	Mylar	AB
C451	VCQYTA2AA104K+	X	0.1	100V	Mylar	AB
C452	VCEA0A1EW336M+	X	33	25V	Electrolytic	AB
C471	VCKYCY1HB103KY	X	0.01	50V	Ceramic	AA
C473	VCCCCY1HH331JY	X	330p	50V	Ceramic	AB
C474	VCKYCY1HB103KY	X	0.01	50V	Ceramic	AA
C475	VCKYCY1CF104ZY	X	0.1	16V	Ceramic	AA
C476	VCKYCY1HB103KY	X	0.01	50V	Ceramic	AA
C501	VCKYPA2HB102K+	X	1000p	500V	Ceramic	AB
C502	VCEA0A1VW477M+	X	470	35V	Electrolytic	AB
C504	VCEACA1HC474M+	X	0.47	50V	Electrolytic	AB
C505	VCEA0A1HW474M+	X	0.47	50V	Electrolytic	AB

Ref. No.	Part No.	★	Description			Code
C506	VCKYCY1HB103KY	X	0.01	50V	Ceramic	AA
C507	VCKYCY1HB103KY	X	0.01	50V	Ceramic	AA
C510	RC-FZ0272CEZZ+	X	0.39	100V	Mylar	AB
C512	VCEA0A1EW476M+	X	47	25V	Electrolytic	AB
C514	VCEA0A1VW107M+	X	100	35V	Electrolytic	AB
C516	VCKYCY1HB472KY	X	4700p	50V	Ceramic	AA
C517	VCKYCY1HF103ZY	X	0.01	50V	Ceramic	AA
C518	VCQYTA2AA473J+	X	0.047	100V	Mylar	AB
C522	VCFYFA1HA334J+	X	0.33	50V	Mylar	AB
C523	VCEA0A1HW105M+	X	1	50V	Electrolytic	AB
C601	VCEA0A1CW108M+	X	1000	16V	Electrolytic	AB
C602	VCKYCY1CF104ZY	X	0.1	16V	Ceramic	AA
C603	VCEA0A1HW225M+	X	2.2	50V	Electrolytic	AB
C604	VCKYCY1EB223KY	X	0.022	25V	Ceramic	AA
C606	VCKYPA2HB102K+	X	1000p	500V	Ceramic	AB
C607	VCKYPA1HB472K+	X	4700p	50V	Ceramic	AB
C608	RC-KZ0033CEZZ	X	150p	2kV	Ceramic	AB
▲⚠ C609	VCFPVC3ZA163H	X	0.016	1500V		AB
			Metallzed Polypro Film			
C610	RC-KZ0038CEZZ+	X	470p	2kV		AB
C611	VCEA0A1EW477M+	X	470	25V	Electrolytic	AB
C614	VCEA0A1EW108M+	X	1000	25V	Electrolytic	AB
C615	VCFYSB2EB823J	X	0.082	250V	Mylar	AB
C616	VCKYPA2HB471K+	X	470p	500V	Ceramic	AB
C617	VCEA0A1HW474M+	X	0.47	50V	Electrolytic	AB
C622	VCKYPA2HB102K+	X	1000p	500V	Ceramic	AB
C623	VCEA4A2EN106M+	X	10	250V	Electrolytic	AB
C652	VCEA0A1HW476M+	X	47	50V	Electrolytic	AB
C653	VCEA0A1HW106M+	X	10	50V	Electrolytic	AB
C674	VCKYCY1HB391KY	X	390p	50V	Ceramic	AA
C675	VCEA0A1HW106M+	X	10	50V	Electrolytic	AB
C677	RC-FZ0377CEZZ	X	4.7	63V	Mylar	AC
▲⚠ C678	VCQPPC2GB563J	X	0.056	400V	Plastic Film	AB
C681	VCFPFA2EB394J	X	0.39	250V		AB
			Metallzed Polypro Film			
C682	VCKYPA2HB102K+	X	1000p	500V	Ceramic	AB
C685	VCQYTA1HM333J+	X	0.033	50V	Mylar	AB
C691	VCQYTA1HM682J+	X	6800p	50V	Mylar	AB
⚠ C701	RC-FZA022WJZZ	X	0.22	AC250V		AB
C702	RC-KZ0029CEZZ+	X	0.01	AC250V	Ceramic	AB
C703	RC-KZ0029CEZZ+	X	0.01	AC250V	Ceramic	AB
⚠ C705	RC-EZ0722CEZZ	X	820	200V	Electrolytic	AG
⚠ C706	RC-KZ0089GEZZA	X	0.001	AC250V	Ceramic	AB
⚠ C707	RC-KZ0092GEZZA	X	0.0033	AC250V	Ceramic	AB
⚠ C723	RC-EZ0724CEZZ	X	100	160V	Electrolytic	AC
⚠ C725	RC-EZA065WJZZ	X	330	160V	Electrolytic	AE
C726	RC-KZ0226CEZZ+	X	560p	2kV	Ceramic	AB
C727	RC-KZ0226CEZZ+	X	560p	2kV	Ceramic	AB
C729	VCEA0A1HW106M+	X	10	50V	Electrolytic	AB
C730	VCEA4A1VN108M+	X	1000	35V	Electrolytic	AC
C731	RC-EZ0385CEZZ+	X	1000	16V	Electrolytic	AB
C732	VCKYPA2HB102K+	X	1000p	500V	Ceramic	AB
C733	VCKYPA2HB102K+	X	1000p	500V	Ceramic	AB
C734	VCKYPA2HB471K+	X	470p	500V	Ceramic	AB
C735	VCKYPA2HB471K+	X	470p	500V	Ceramic	AB
C736	VCKYCY1HF103ZY	X	0.01	50V	Ceramic	AA
C737	VCEA0A1HW226M+	X	22	50V	Electrolytic	AB
C738	VCFPVC3CA102H	X	1000p	1.25kV		AB
			Metallzed Polypro Film			
C739	RC-EZ0385CEZZ+	X	1000	16V	Electrolytic	AB
C740	VCEA0A1HW476M+	X	47	50V	Electrolytic	AB
C741	VCEA4A2AN105M+	X	1	100V	Electrolytic	AB
C742	VCEA0A1HW226M+	X	22	50V	Electrolytic	AB
C743	RC-KZ0036CEZZ+	X	330p	2kV	Ceramic	AB
C744	VCKYPA2HB471K+	X	470p	500V	Ceramic	AB
C745	VCKYPA2HB102K+	X	1000p	500V	Ceramic	AB
C746	VCKYPA2HB102K+	X	1000p	500V	Ceramic	AB
C747	VCEA0A1HW475M+	X	4.7	50V	Electrolytic	AB
C750	VCKYCY1HF103ZY	X	0.01	50V	Ceramic	AA
C753	RC-KZ0036CEZZ+	X	330p	2kV	Ceramic	AB
C754	VCKYPA2HB472K+	X	4700p	500V	Ceramic	AB
C755	VCEA0A1EW476M+	X	47	25V	Electrolytic	AB
C758	VCEA0A1HW475M+	X	4.7	50V	Electrolytic	AB
C780	VCEA0A1HW226M+	X	22	50V	Electrolytic	AB
C781	VCFYFA1HA105J+	X	1	50V		AB
C782	VCKYCY1HB102KY	X	1000p	50V	Ceramic	AA
C783	VCQYTA1HM103J+	X	0.01	50V	Mylar	AB
C784	VCKYCY1HF103ZY	X	0.01	50V	Ceramic	AA
C801	VCCCCY1HH110JY	X	11p	50V	Ceramic	AA
C802	VCKYCY1HB222KY	X	2200p	50V	Ceramic	AA
C803	VCEA0A1HW224M+	X	0.22	50V	Electrolytic	AB
C804	VCKYCY1CF104ZY	X	0.1	16V	Ceramic	AA
C805	VCEA0A0JW108M+	X	1000	6.3V	Electrolytic	AB
C806	VCKYCY1CF104ZY	X	0.1	16V	Ceramic	AA
C807	VCKYCY1CF104ZY	X	0.1	16V	Ceramic	AA
C808	VCKYCY1CF104ZY	X	0.1	16V	Ceramic	AA
C809	VCKYCY1CF104ZY	X	0.1	16V	Ceramic	AA
C810	VCEA0A1CW477M+	X	470	16V	Electrolytic	AB
C812	VCQYTA1HM104J+	X	0.1	50V	Mylar	AB
C901	VCKYCY1HB103KY	X	0.01	50V	Ceramic	AA
C902	VCKYCY1HB103KY	X	0.01	50V	Ceramic	AA
C903	VCKYCY1HB681KY	X	680p	50V	Ceramic	AA
C904	VCEA0A1HW105M+	X	1	50V	Electrolytic	AB
C905	VCEA0A1HW105M+	X	1	50V	Electrolytic	AB
C906	VCKYCY1HB681KY	X	680p	50V	Ceramic	AA
C907	VCEA0A1HW105M+	X	1	50V	Electrolytic	AB
C908	VCKYCY1HB103KY	X	0.01	50V	Ceramic	AA
C909	VCEA0A1HW105M+	X	1	50V	Electrolytic	AB
C910	VCEA0A1HW105M+	X	1	50V	Electrolytic	AB
C911	VCEA0A1HW105M+	X	1	50V	Electrolytic	AB
C912	VCEA0A1HW105M+	X	1	50V	Electrolytic	AB
C913	VCEA0A1HW105M+	X	1	50V	Electrolytic	AB
C914	VCKYCY1HB681KY	X	680p	50V	Ceramic	AA
C915	VCKYPA1HF103Z+	X	0.01	50V	Ceramic	AA
C916	VCKYCY1HB103KY	X	0.01	50V	Ceramic	AA
C917	VCEA0A1HW105M+	X	1	50V	Electrolytic	AB
C918	VCKYCY1HB681KY	X	680p	50V	Ceramic	AA
C919	VCEA0A1HW105M+	X	1	50V	Electrolytic	AB
C920	VCEA0A1HW105M+	X	1	50V	Electrolytic	AB
C921	VCKYCY1HB681KY	X	680p	50V	Ceramic	AA
C922	VCKYCY1CF104ZY	X	0.1	16V	Ceramic	AA
C923	VCEA0A1CW107M+	X	100	16V	Electrolytic	AB
C926	VCEA0A1EW476M+	X	47	25V	Electrolytic	AB
C928	VCEA0A1HW105M+	X	1	50V	Electrolytic	AB
C930	VCEA0A1HW475M+	X	4.7	50V	Electrolytic	AB
C931	VCKYCY1HB183KY	X	0.018	50V	Ceramic	AA
C932	VCKYCY1HB183KY	X	0.018	50V	Ceramic	AA
C933	VCEA0A1HW475M+	X	4.7	50V	Electrolytic	AB
C934	VCEA0A1EW476M+	X	47	25V	Electrolytic	AB
C935	VCEA0A1HW475M+	X	4.7	50V	Electrolytic	AB
C936	VCEA0A1HW475M+	X	4.7	50V	Electrolytic	AB
C937	VCKYCY1HB103KY	X	0.01	50V	Ceramic	AA
C953	VCKYCY1HB681KY	X	680p	50V	Ceramic	AA
C956	VCEA0A1CW477M+	X	470	16V	Electrolytic	AB
C962	VCCCCY1HH470JY	X	47p	50V	Ceramic	AA
C1434	VCEA0A1EW476M+	X	47	25V	Electrolytic	AB
C1437	VCEA0A1EW476M+	X	47	25V	Electrolytic	AB
C2001	VCCCCY1HH101JY	X	100p	50V	Ceramic	AA
C2002	VCKYCY1HF103ZY	X	0.01	50V	Ceramic	AA
C2025	VCCCCY1HH101JY	X	100p	50V	Ceramic	AA
C2040	VCKYCY1CF104ZY	X	0.1	16V	Ceramic	AA
C2041	VCEA0A1HW105M+	X	1	50V	Electrolytic	AB
C2043	VCCCCY1HH331JY	X	330p	50V	Ceramic	AA
C2044	VCCCCY1HH100DY	X	10p	50V	Ceramic	AA
C2046	VCEA0A1EW476M+	X	47	25V	Electrolytic	AB
C2047	VCKYCY1CB473KY	X	0.047	16V	Ceramic	AA
C2060	VCKYCY1CF104ZY	X	0.1	16V	Ceramic	AA
C2061	VCCCCY1HH101JY	X	100p	50V	Ceramic	AA
C2062	VCEA0A1CW107M+	X	100	16V	Electrolytic	AB
C2063	VCKYCY1CF104ZY	X	0.1	16V	Ceramic	AA
C2064	VCKYCY1CF104ZY	X	0.1	16V	Ceramic	AA
C2201	VCKYCY1HB681KY	X	680p	50V	Ceramic	AA
C2202	VCCCCY1HH330JY	X	33p	50V	Ceramic	AA
C2501	VCKYCY1HB102KY	X	1000p	50V	Ceramic	AA
C2603	VCCCCY1HH101JY	X	100p	50V	Ceramic	AA
C3001	VCEA0A1HW475M+	X	4.7	50V	Electrolytic	AB
C3002	VCKYCY1HB562KY	X	5600p	50V	Ceramic	AA
C3003	VCKYCY1EB123KY	X	0.012	25V	Ceramic	AA
C3004	VCEA0A1HW105M+	X	1	50V	Electrolytic	AB
C3005	VCEA0A1HW475M+	X	4.7	50V	Electrolytic	AB
C3006	VCEA0A1HW106M+	X	10	50V	Electrolytic	AB
C3007	VCEA0A1HW475M+	X	4.7	50V	Electrolytic	AB

Ref. No.	Part No.	★	Description			Code
C3008	VCKYCY1CF104ZY	X	0.1	16V	Ceramic	AA
C3009	VCEA0A1CW477M+	X	470	16V	Electrolytic	AB
C3010	VCE9GA1HW475M+	X	4.7	50V	Electrolytic	AB
C3011	VCEA0A1HW475M+	X	4.7	50V	Electrolytic	AB
C3012	VCEA0A1HW475M+	X	4.7	50V	Electrolytic	AB
C3013	VCKYCY1HB272KY	X	2700p	50V	Ceramic	AA
C3014	VCKYCY1CB473KY	X	0.047	16V	Ceramic	AA
C3015	VCEACA1HC335K+	X	3.3	50V	Electrolytic	AB
C3016	VCE9GA1HW475M+	X	4.7	50V	Electrolytic	AB
C3017	VCEACA1CC106K+	X	10	16V	Electrolytic	AB
C3018	VCEA0A1HW105M+	X	1	50V	Electrolytic	AB
C3021	VCEA0A1HW475M+	X	4.7	50V	Electrolytic	AB
C3022	VCEA0A1HW475M+	X	4.7	50V	Electrolytic	AB
C3025	VCKYCY1CB473KY	X	0.047	16V	Ceramic	AA
C3027	VCKYCY1CB473KY	X	0.047	16V	Ceramic	AA
C3028	VCKYCY1HB682KY	X	6800p	50V	Ceramic	AA
C3029	VCKYCY1HB682KY	X	6800p	50V	Ceramic	AA

RESISTORS

Ref. No.	Part No.	★	Description			Code
RJ1	VRS-CY1JF000JY	X	0	1/16W	Metal Oxide	AA
RJ7	VRS-CY1JF000JY	X	0	1/16W	Metal Oxide	AA
RJ8	VRS-CY1JF000JY	X	0	1/16W	Metal Oxide	AA
RJ9	VRS-CY1JF000JY	X	0	1/16W	Metal Oxide	AA
RJ10	VRS-CY1JF000JY	X	0	1/16W	Metal Oxide	AA
RJ11	VRS-CY1JF000JY	X	0	1/16W	Metal Oxide	AA
RJ12	VRS-CY1JF000JY	X	0	1/16W	Metal Oxide	AA
RJ13	VRS-CY1JF000JY	X	0	1/16W	Metal Oxide	AA
RJ14	VRS-CY1JF000JY	X	0	1/16W	Metal Oxide	AA
RJ15	VRS-CY1JF000JY	X	0	1/16W	Metal Oxide	AA
RJ16	VRS-CY1JF000JY	X	0	1/16W	Metal Oxide	AA
RJ19	VRS-CY1JF000JY	X	0	1/16W	Metal Oxide	AA
RJ20	VRS-CY1JF000JY	X	0	1/16W	Metal Oxide	AA
RJ21	VRS-CY1JF000JY	X	0	1/16W	Metal Oxide	AA
RJ22	VRS-CY1JF000JY	X	0	1/16W	Metal Oxide	AA
RJ23	VRS-CY1JF000JY	X	0	1/16W	Metal Oxide	AA
RJ24	VRS-CY1JF000JY	X	0	1/16W	Metal Oxide	AA
RJ25	VRS-CY1JF000JY	X	0	1/16W	Metal Oxide	AA
RJ30	VRS-CY1JF000JY	X	0	1/16W	Metal Oxide	AA
RJ33	VRS-CY1JF000JY	X	0	1/16W	Metal Oxide	AA
RJ36	VRS-CY1JF000JY	X	0	1/16W	Metal Oxide	AA
RJ38	VRS-CY1JF000JY	X	0	1/16W	Metal Oxide	AA
RJ39	VRS-CY1JF000JY	X	0	1/16W	Metal Oxide	AA
RJ40	VRS-CY1JF000JY	X	0	1/16W	Metal Oxide	AA
RJ42	VRS-CY1JF000JY	X	0	1/16W	Metal Oxide	AA
RJ45	VRS-CY1JF000JY	X	0	1/16W	Metal Oxide	AA
RJ47	VRS-CY1JF000JY	X	0	1/16W	Metal Oxide	AA
RJ48	VRS-CY1JF000JY	X	0	1/16W	Metal Oxide	AA
RJ50	VRS-CY1JF000JY	X	0	1/16W	Metal Oxide	AA
R54	VRS-CY1JF101JY	X	100	1/16W	Metal Oxide	AA
R55	VRS-CY1JF101JY	X	100	1/16W	Metal Oxide	AA
R56	VRD-RA2BE823JY	X	82k	1/8W	Carbon	AA
R57	VRS-CY1JF473JY	X	47k	1/16W	Metal Oxide	AA
R201	VRS-CY1JF151JY	X	150	1/16W	Metal Oxide	AA
R202	VRS-CY1JF122JY	X	1.2k	1/16W	Metal Oxide	AA
R203	VRS-CY1JF682JY	X	6.8k	1/16W	Metal Oxide	AA
R204	VRS-CY1JF270JY	X	27	1/16W	Metal Oxide	AA
R205	VRS-CY1JF331JY	X	330	1/16W	Metal Oxide	AA
R206	VRD-RA2BE101JY	X	100	1/8W	Carbon	AA
R211	VRS-CY1JF221JY	X	220	1/16W	Metal Oxide	AA
R212	VRS-CY1JF221JY	X	220	1/16W	Metal Oxide	AA
R225	VRS-CY1JF101JY	X	100	1/16W	Metal Oxide	AA
R226	VRS-CY1JF101JY	X	100	1/16W	Metal Oxide	AA
R227	VRS-CY1JF273JY	X	27k	1/16W	Metal Oxide	AA
R232	VRS-CY1JF471JY	X	470	1/16W	Metal Oxide	AA
R234	VRD-RA2BE271JY	X	270	1/8W	Carbon	AA
R236	VRS-CY1JF332JY	X	3.3k	1/16W	Metal Oxide	AA
R301	VRS-CY1JF222JY	X	2.2k	1/16W	Metal Oxide	AA
R305	VRS-CY1JF000JY	X	0	1/16W	Metal Oxide	AA
R306	VRS-CY1JF102JY	X	1k	1/16W	Metal Oxide	AA
R307	VRS-CY1JF101JY	X	100	1/16W	Metal Oxide	AA
R308	VRS-CY1JF000JY	X	0	1/16W	Metal Oxide	AA
R355	VRD-RA2BE821JY	X	820	1/8W	Carbon	AA
R361	VRD-RA2BE224JY	X	220k	1/8W	Carbon	AA
R362	VRS-CY1JF222JY	X	2.2k	1/16W	Metal Oxide	AA
R363	VRS-CY1JF222JY	X	2.2k	1/16W	Metal Oxide	AA
R364	VRD-RA2BE152JY	X	1.5k	1/8W	Carbon	AA
R365	VRS-CY1JF152JY	X	1.5k	1/16W	Metal Oxide	AA
⚠ R367	VRN-RL3DB1R2J+	X	1.2	2W	Metal Film	AB
R368	VRD-RA2BE222JY	X	2.2k	1/8W	Carbon	AA
R369	VRD-RA2BE822JY	X	8.2k	1/8W	Carbon	AA
R371	VRS-CY1JF102JY	X	1k	1/16W	Metal Oxide	AA
R372	VRS-CY1JF223JY	X	22k	1/16W	Metal Oxide	AA
R403	VRS-CY1JF000JY	X	0	1/16W	Metal Oxide	AA
R404	VRS-CY1JF683JY	X	68k	1/16W	Metal Oxide	AA
R406	VRS-CY1JF473JY	X	47k	1/16W	Metal Oxide	AA
R407	VRS-CY1JF102JY	X	1k	1/16W	Metal Oxide	AA
R408	VRS-CY1JF683JY	X	68k	1/16W	Metal Oxide	AA
R410	VRS-CY1JF473JY	X	47k	1/16W	Metal Oxide	AA
R411	VRS-CY1JF102JY	X	1k	1/16W	Metal Oxide	AA
R412	VRS-CY1JF101JY	X	100	1/16W	Metal Oxide	AA
R413	VRS-CY1JF101JY	X	100	1/16W	Metal Oxide	AA
R422	VRS-CY1JF000JY	X	0	1/16W	Metal Oxide	AA
R430	VRS-CY1JF391JY	X	390	1/16W	Metal Oxide	AA
R431	VRS-CY1JF331JY	X	330	1/16W	Metal Oxide	AA
R432	VRS-CY1JF102JY	X	1k	1/16W	Metal Oxide	AA
R436	VRS-CY1JF000JY	X	0	1/16W	Metal Oxide	AA
R437	VRS-CY1JF101JY	X	100	1/16W	Metal Oxide	AA
R438	VRS-CY1JF101JY	X	100	1/16W	Metal Oxide	AA
R439	VRS-CY1JF104JY	X	100k	1/16W	Metal Oxide	AA
R441	VRS-CY1JF472JY	X	4.7k	1/16W	Metal Oxide	AA
R442	VRS-CY1JF101JY	X	100	1/16W	Metal Oxide	AA
R444	VRS-CY1JF332JY	X	3.3k	1/16W	Metal Oxide	AA
R445	VRS-CY1JF332JY	X	3.3k	1/16W	Metal Oxide	AA
R446	VRS-CY1JF332JY	X	3.3k	1/16W	Metal Oxide	AA
R447	VRS-CY1JF101JY	X	100	1/16W	Metal Oxide	AA
R448	VRS-CY1JF101JY	X	100	1/16W	Metal Oxide	AA
R449	VRS-CY1JF101JY	X	100	1/16W	Metal Oxide	AA
R450	VRS-CY1JF101JY	X	100	1/16W	Metal Oxide	AA
⚠ R451	VRS-RG3AB103J+	X	10k	1W	Metal Oxide	AB
R452	VRD-RM2HD473JY	X	47k	1/2W	Carbon	AA
R453	VRD-RM2HD223JY	X	22k	1/2W	Carbon	AA
R454	VRS-CY1JF471JY	X	470	1/16W	Metal Oxide	AA
R456	VRS-CY1JF103JY	X	10k	1/16W	Metal Oxide	AA
R460	VRS-CY1JF471JY	X	470	1/16W	Metal Oxide	AA
R461	VRS-CY1JF562JY	X	5.6k	1/16W	Metal Oxide	AA
R462	VRS-CY1JF223JY	X	22k	1/16W	Metal Oxide	AA
R463	VRD-RA2EE680JY	X	68	1/4W	Carbon	AA
R464	VRS-CY1JF683JY	X	68k	1/16W	Metal Oxide	AA
R467	VRS-CY1JF123JY	X	12k	1/16W	Metal Oxide	AA
R471	VRS-CY1JF333JY	X	33k	1/16W	Metal Oxide	AA
R472	VRS-CY1JF273JY	X	27k	1/16W	Metal Oxide	AA
R473	VRS-CY1JF471JY	X	470	1/16W	Metal Oxide	AA
R474	VRS-CY1JF681JY	X	680	1/16W	Metal Oxide	AA
R475	VRS-CY1JF102JY	X	1k	1/16W	Metal Oxide	AA
R476	VRS-CY1JF393JY	X	39k	1/16W	Metal Oxide	AA
R477	VRS-CY1JF182JY	X	1.8k	1/16W	Metal Oxide	AA
R478	VRS-CY1JF151JY	X	150	1/16W	Metal Oxide	AA
R479	VRS-CY1JF473JY	X	47k	1/16W	Metal Oxide	AA
R480	VRS-CY1JF223JY	X	22k	1/16W	Metal Oxide	AA
R481	VRS-CY1JF152JY	X	1.5k	1/16W	Metal Oxide	AA
R482	VRS-CY1JF100JY	X	10	1/16W	Metal Oxide	AA
R483	VRS-CY1JF101JY	X	100	1/16W	Metal Oxide	AA
⚠ R501	VRN-RL3ABR47J+	X	0.47	1W	Metal Film	AB
R502	VRN-RA2BK822FY	X	8.2k	1/8W	Metal Film	AB
R503	VRS-CY1JF105JY	X	1M	1/16W	Metal Oxide	AA
R504	VRS-CY1JF154JY	X	150k	1/16W	Metal Oxide	AA
R505	VRS-CY1JF101JY	X	100	1/16W	Metal Oxide	AA
R510	VRN-RA2BK103FY	X	10k	1/8W	Metal Film	AB
R511	VRN-RA2BK222FY	X	2.2k	1/8W	Metal Film	AB
R512	VRN-RA2BK272FY	X	2.7k	1/8W	Metal Film	AB
R513	VRD-RM2HD1R5JY	X	1.5	1/2W	Carbon	AA
R517	VRS-CY1JF104JY	X	100k	1/16W	Metal Oxide	AA
R518	VRS-CY1JF102JY	X	1k	1/16W	Metal Oxide	AA
R521	VRS-CY1JF101JY	X	100	1/16W	Metal Oxide	AA
⚠ R523	VRN-RL3DBR82J+	X	0.82	2W	Metal Film	AB
⚠ R524	VRS-RG3AB561J+	X	560	1W	Metal Oxide	AB
R601	VRS-CY1JF101JY	X	100	1/16W	Metal Oxide	AA
R603	VRD-RA2BE472JY	X	4.7k	1/8W	Carbon	AA
⚠ R604	VRS-KA3NG562J	X	5.6k	7W	Metal Oxide	AB
R605	VRD-RM2HD331JY	X	330	1/2W	Carbon	AA
R606	VRD-RM2HD331JY	X	330	1/2W	Carbon	AA
⚠ R609	VRS-RG3DB332J+	X	3.3k	2W	Metal Oxide	AB

Ref. No.	Part No.	★	Description			Code
R610	VRD-RM2HD220JY	X	22	1/2W	Carbon	AA
⚠ R611	VRW-KQ41C3R3K	X	3.3	15W	Cement	AB
R612	VRS-CY1JF154JY	X	150k	1/16W	Metal Oxide	AA
R613	VRS-CY1JF101JY	X	100	1/16W	Metal Oxide	AA
R614	VRS-CY1JF562JY	X	5.6k	1/16W	Metal Oxide	AA
R618	VRS-CY1JF101JY	X	100	1/16W	Metal Oxide	AA
⚠ R621	VRN-RL3AB4R7J+	X	4.7	1W	Metal Film	AB
⚠ R622	VRN-RL3ABR33J+	X	0.33	1W	Metal Film	AB
⚠ R623	VRN-RL3AB4R7J+	X	4.7	1W	Metal Film	AB
⚠ R624	VRS-RG3DB332J+	X	3.3k	2W	Metal Oxide	AB
⚠ R627	VRN-RL3ABR47J+	X	0.47	1W	Metal Film	AB
⚠ R628	VRN-RL3ABR47J+	X	0.47	1W	Metal Film	AB
▲ ⚠ R651	VRS-RG2HC270J+	X	27	1/2W	Metal Oxide	AB
▲ ⚠ R652	VRD-RA2EE103GY	X	10k	1/4W	Carbon	AA
▲ ⚠ R653	VRD-RA2EE562GY	X	5.6k	1/4W	Carbon	AA
▲ ⚠ R654	VRD-RA2BE683JY	X	68k	1/8W	Carbon	AA
⚠ R658	VRS-RG3DB183J+	X	18k	2W	Metal Oxide	AB
R663	VRS-CY1JF102JY	X	1k	1/16W	Metal Oxide	AA
R670	VRS-CY1JF000JY	X	0	1/16W	Metal Oxide	AA
R684	VRD-RA2BE472JY	X	4.7k	1/8W	Carbon	AA
R685	VRD-RA2BE822JY	X	8.2k	1/8W	Carbon	AA
R686	VRD-RA2EE332JY	X	3.3k	1/4W	Carbon	AA
R687	VRD-RA2BE103JY	X	10k	1/8W	Carbon	AA
⚠ R688	VRN-RL3DB3R3J+	X	3.3	2W	Metal Film	AB
R689	VRD-RM2HD824JY	X	820k	1/2W	Carbon	AA
⚠ R690	VRS-RG3LB122J+	X	1.2k	3W	Metal Oxide	AB
R691	VRS-CY1JF394JY	X	390k	1/16W	Metal Oxide	AA
R692	VRS-CY1JF183JY	X	18k	1/16W	Metal Oxide	AA
R693	VRS-CY1JF683JY	X	68k	1/16W	Metal Oxide	AA
R694	VRS-CY1JF102JY	X	1k	1/16W	Metal Oxide	AA
R695	VRS-CY1JF683JY	X	68k	1/16W	Metal Oxide	AA
R696	VRS-CY1JF000JY	X	0	1/16W	Metal Oxide	AA
R697	VRS-CY1JF684JY	X	680k	1/16W	Metal Oxide	AA
R698	VRS-CY1JF335JY	X	3.3M	1/16W	Metal Oxide	AA
⚠ R703	VRW-KQ4AC1R2K	X	1.2	10W	Cement	AB
⚠ R705	VRN-RL3DBR15J+	X	0.15	2W	Metal Film	AB
⚠ R706	VRN-RL3DBR15J+	X	0.15	2W	Metal Film	AB
R707	VRD-RM2HD270JY	X	27	1/2W	Carbon	AA
R708	VRS-CY1JF102JY	X	1k	1/16W	Metal Oxide	AA
R709	VRS-CY1JF393JY	X	39k	1/16W	Metal Oxide	AA
⚠ R710	VRS-RG2HC103J+	X	10k	1/2W	Metal Oxide	AB
R711	VRS-CY1JF334JY	X	330k	1/16W	Metal Oxide	AA
R712	VRD-RM2HD100JY	X	10	1/2W	Carbon	AA
⚠ R713	VRS-RG2HC152J+	X	1.5k	1/2W	Metal Oxide	AB
R714	VRS-CY1JF332JY	X	3.3k	1/16W	Metal Oxide	AA
R715	VRN-RL2HCR56J+	X	0.56	1/2W	Metal Film	AB
R716	VRD-RM2HD100JY	X	10	1/2W	Carbon	AA
R720	VRD-RA2BE473JY	X	47k	1/8W	Carbon	AA
R724	VRD-RM2HD101JY	X	100	1/2W	Carbon	AA
R725	VRD-RM2HD821JY	X	820	1/2W	Carbon	AA
R734	VRD-RM2HD124JY	X	120k	1/2W	Carbon	AA
⚠ R737	VRN-RL3LBR82J+	X	0.82	3W	Metal Film	AB
R742	VRD-RA2BE222JY	X	2.2k	1/8W	Carbon	AA
R743	VRD-RM2HD470JY	X	47	1/2W	Carbon	AA
R744	VRS-CY1JF103JY	X	10k	1/16W	Metal Oxide	AA
R745	VRD-RA2BE683JY	X	68k	1/8W	Carbon	AA
R750	VRS-CY1JF224JY	X	220k	1/16W	Metal Oxide	AA
R751	VRD-RA2BE473JY	X	47k	1/8W	Carbon	AA
R752	VRD-RA2BE392JY	X	3.9k	1/8W	Carbon	AA
R753	VRS-CY1JF223JY	X	22k	1/16W	Metal Oxide	AA
R754	VRS-CY1JF222JY	X	2.2k	1/16W	Metal Oxide	AA
R755	VRS-CY1JF473JY	X	47k	1/16W	Metal Oxide	AA
R756	VRD-RA2BE152JY	X	1.5k	1/8W	Carbon	AA
⚠ R757	VRN-RL3DB4R7J+	X	4.7	2W	Metal Film	AB
R759	VRS-CY1JF103JY	X	10k	1/16W	Metal Oxide	AA
R761	VRS-CY1JF332JY	X	3.3k	1/16W	Metal Oxide	AA
R762	VRD-RA2EE151JY	X	150	1/4W	Carbon	AA
R764	VRD-RM2HD562JY	X	5.6k	1/2W	Carbon	AA
R767	VRD-RM2HD151JY	X	150	1/2W	Carbon	AA
R768	VRD-RA2BE393JY	X	39k	1/8W	Carbon	AA
R775	VRS-CY1JF332JY	X	3.3k	1/16W	Metal Oxide	AA
R776	VRS-CY1JF332JY	X	3.3k	1/16W	Metal Oxide	AA
R801	VRS-CY1JF333JY	X	33k	1/16W	Metal Oxide	AA
R802	VRS-CY1JF471JY	X	470	1/16W	Metal Oxide	AA
R803	VRS-CY1JF000JY	X	0	1/16W	Metal Oxide	AA
R805	VRS-CY1JF682JY	X	6.8k	1/16W	Metal Oxide	AA

Ref. No.	Part No.	★	Description			Code
R806	VRS-CY1JF681JY	X	680	1/16W	Metal Oxide	AA
R807	VRS-CY1JF681JY	X	680	1/16W	Metal Oxide	AA
R808	VRS-CY1JF681JY	X	680	1/16W	Metal Oxide	AA
R810	VRS-CY1JF472JY	X	4.7k	1/16W	Metal Oxide	AA
R903	VRS-CY1JF102JY	X	1k	1/16W	Metal Oxide	AA
R904	VRS-CY1JF683JY	X	68k	1/16W	Metal Oxide	AA
R905	VRS-CY1JF223JY	X	22k	1/16W	Metal Oxide	AA
R906	VRD-RA2BE332JY	X	3.3k	1/8W	Carbon	AA
R907	VRS-CY1JF152JY	X	1.5k	1/16W	Metal Oxide	AA
R908	VRS-CY1JF102JY	X	1k	1/16W	Metal Oxide	AA
R910	VRD-RA2BE102JY	X	1k	1/8W	Carbon	AA
R911	VRS-CY1JF683JY	X	68k	1/16W	Metal Oxide	AA
R912	VRS-CY1JF223JY	X	22k	1/16W	Metal Oxide	AA
R913	VRS-CY1JF332JY	X	3.3k	1/16W	Metal Oxide	AA
R914	VRS-CY1JF152JY	X	1.5k	1/16W	Metal Oxide	AA
R915	VRS-CY1JF102JY	X	1k	1/16W	Metal Oxide	AA
R916	VRS-CY1JF683JY	X	68k	1/16W	Metal Oxide	AA
R917	VRS-CY1JF332JY	X	3.3k	1/16W	Metal Oxide	AA
R918	VRS-CY1JF332JY	X	3.3k	1/16W	Metal Oxide	AA
R922	VRS-CY1JF102JY	X	1k	1/16W	Metal Oxide	AA
R923	VRS-CY1JF102JY	X	1k	1/16W	Metal Oxide	AA
R924	VRS-CY1JF750JY	X	75	1/16W	Metal Oxide	AA
R925	VRS-CY1JF750JY	X	75	1/16W	Metal Oxide	AA
R926	VRS-CY1JF680JY	X	68	1/16W	Metal Oxide	AA
R927	VRS-CY1JF750JY	X	75	1/16W	Metal Oxide	AA
R929	VRS-CY1JF473JY	X	47k	1/16W	Metal Oxide	AA
R930	VRS-CY1JF473JY	X	47k	1/16W	Metal Oxide	AA
R931	VRS-CY1JF750JY	X	75	1/16W	Metal Oxide	AA
R932	VRS-CY1JF473JY	X	47k	1/16W	Metal Oxide	AA
R933	VRS-CY1JF473JY	X	47k	1/16W	Metal Oxide	AA
R934	VRS-CY1JF103JY	X	10k	1/16W	Metal Oxide	AA
R935	VRS-CY1JF101JY	X	100	1/16W	Metal Oxide	AA
R936	VRS-CY1JF223JY	X	22k	1/16W	Metal Oxide	AA
R937	VRS-CY1JF101JY	X	100	1/16W	Metal Oxide	AA
R938	VRS-CY1JF223JY	X	22k	1/16W	Metal Oxide	AA
R939	VRS-CY1JF333JY	X	33k	1/16W	Metal Oxide	AA
R940	VRS-CY1JF8R2JY	X	8.2	1/16W	Metal Oxide	AA
R941	VRS-CY1JF101JY	X	100	1/16W	Metal Oxide	AA
R942	VRS-CY1JF223JY	X	22k	1/16W	Metal Oxide	AA
R943	VRS-CY1JF101JY	X	100	1/16W	Metal Oxide	AA
R944	VRS-CY1JF223JY	X	22k	1/16W	Metal Oxide	AA
R945	VRS-CY1JF101JY	X	100	1/16W	Metal Oxide	AA
R946	VRS-CY1JF103JY	X	10k	1/16W	Metal Oxide	AA
R947	VRS-CY1JF223JY	X	22k	1/16W	Metal Oxide	AA
R948	VRS-CY1JF101JY	X	100	1/16W	Metal Oxide	AA
R949	VRS-CY1JF223JY	X	22k	1/16W	Metal Oxide	AA
R950	VRS-CY1JF560JY	X	56	1/16W	Metal Oxide	AA
R951	VRD-RA2BE680JY	X	68	1/8W	Carbon	AA
R952	VRS-CY1JF333JY	X	33k	1/16W	Metal Oxide	AA
R953	VRS-CY1JF220JY	X	22	1/16W	Metal Oxide	AA
R954	VRS-CY1JF221JY	X	220	1/16W	Metal Oxide	AA
R955	VRS-CY1JF221JY	X	220	1/16W	Metal Oxide	AA
R957	VRS-CY1JF101JY	X	100	1/16W	Metal Oxide	AA
R958	VRS-CY1JF101JY	X	100	1/16W	Metal Oxide	AA
R959	VRS-CY1JF103JY	X	10k	1/16W	Metal Oxide	AA
R960	VRS-CY1JF101JY	X	100	1/16W	Metal Oxide	AA
R961	VRS-CY1JF102JY	X	1k	1/16W	Metal Oxide	AA
R962	VRS-CY1JF332FY	X	3.3k	1/16W	Metal Oxide	AA
R963	VRD-RA2BE101JY	X	100	1/8W	Carbon	AA
R964	VRS-CY1JF101JY	X	100	1/16W	Metal Oxide	AA
R967	VRS-CY1JF682JY	X	6.8k	1/16W	Metal Oxide	AA
R968	VRS-CY1JF102JY	X	1k	1/16W	Metal Oxide	AA
R969	VRS-CY1JF472FY	X	4.7k	1/16W	Metal Oxide	AA
R970	VRD-RA2BE6R8JY	X	6.8	1/8W	Carbon	AA
R971	VRS-CY1JF101JY	X	100	1/16W	Metal Oxide	AA
R972	VRS-CY1JF101JY	X	100	1/16W	Metal Oxide	AA
R973	VRS-CY1JF000JY	X	0	1/16W	Metal Oxide	AA
R974	VRS-CY1JF103JY	X	10k	1/16W	Metal Oxide	AA
R975	VRS-CY1JF333JY	X	33k	1/16W	Metal Oxide	AA
R983	VRS-CY1JF473JY	X	47k	1/16W	Metal Oxide	AA
R984	VRS-CY1JF473JY	X	47k	1/16W	Metal Oxide	AA
⚠ R1420	VRN-RL3LB2R7J+	X	2.7	3W	Metal Film	AB
R2001	VRS-CY1JF102JY	X	1k	1/16W	Metal Oxide	AA
R2004	VRS-CY1JF101JY	X	100	1/16W	Metal Oxide	AA
R2008	VRS-CY1JF102JY	X	1k	1/16W	Metal Oxide	AA
R2010	VRS-CY1JF102JY	X	1k	1/16W	Metal Oxide	AA

Ref. No.	Part No.	★	Description	Code
R2013	VRS-CY1JF682JY	X	6.8k 1/16W Metal Oxide	AA
R2021	VRS-CY1JF334JY	X	330k 1/16W Metal Oxide	AA
R2024	VRS-CY1JF472JY	X	4.7k 1/16W Metal Oxide	AA
R2025	VRS-CY1JF472JY	X	4.7k 1/16W Metal Oxide	AA
R2026	VRS-CY1JF472JY	X	4.7k 1/16W Metal Oxide	AA
R2027	VRS-CY1JF102JY	X	1k 1/16W Metal Oxide	AA
R2028	VRD-RA2BE102JY	X	1k 1/8W Carbon	AA
R2031	VRS-CY1JF222JY	X	2.2k 1/16W Metal Oxide	AA
R2033	VRS-CY1JF334JY	X	330k 1/16W Metal Oxide	AA
R2040	VRS-CY1JF102JY	X	1k 1/16W Metal Oxide	AA
R2041	VRS-CY1JF333JY	X	33k 1/16W Metal Oxide	AA
R2042	VRS-CY1JF101JY	X	100 1/16W Metal Oxide	AA
R2043	VRS-CY1JF333JY	X	33k 1/16W Metal Oxide	AA
R2044	VRS-CY1JF153JY	X	15k 1/16W Metal Oxide	AA
R2045	VRS-CY1JF473JY	X	47k 1/16W Metal Oxide	AA
R2046	VRS-CY1JF101JY	X	100 1/16W Metal Oxide	AA
R2047	VRS-CY1JF221JY	X	220 1/16W Metal Oxide	AA
R2048	VRS-CY1JF562JY	X	5.6k 1/16W Metal Oxide	AA
R2051	VRS-CY1JF102JY	X	1k 1/16W Metal Oxide	AA
R2054	VRS-CY1JF102JY	X	1k 1/16W Metal Oxide	AA
R2060	VRS-CY1JF221JY	X	220 1/16W Metal Oxide	AA
R2061	VRS-CY1JF562JY	X	5.6k 1/16W Metal Oxide	AA
R2062	VRS-CY1JF223JY	X	22k 1/16W Metal Oxide	AA
R2063	VRS-CY1JF222JY	X	2.2k 1/16W Metal Oxide	AA
R2064	VRS-CY1JF332JY	X	3.3k 1/16W Metal Oxide	AA
R2073	VRS-CY1JF000JY	X	0 1/16W Metal Oxide	AA
R2084	VRS-CY1JF103JY	X	10k 1/16W Metal Oxide	AA
R2086	VRS-CY1JF101JY	X	100 1/16W Metal Oxide	AA
R2088	VRS-CY1JF224JY	X	220k 1/16W Metal Oxide	AA
R2089	VRS-CY1JF273JY	X	27k 1/16W Metal Oxide	AA
R2090	VRS-CY1JF682JY	X	6.8k 1/16W Metal Oxide	AA
R2092	VRS-CY1JF101JY	X	100 1/16W Metal Oxide	AA
R2093	VRS-CY1JF224JY	X	220k 1/16W Metal Oxide	AA
R2094	VRS-CY1JF473JY	X	47k 1/16W Metal Oxide	AA
R2095	VRS-CY1JF101JY	X	100 1/16W Metal Oxide	AA
R2096	VRS-CY1JF101JY	X	100 1/16W Metal Oxide	AA
R2101	VRS-CY1JF101JY	X	100 1/16W Metal Oxide	AA
R2102	VRS-CY1JF101JY	X	100 1/16W Metal Oxide	AA
R2201	VRS-CY1JF222JY	X	2.2k 1/16W Metal Oxide	AA
R2202	VRS-CY1JF103JY	X	10k 1/16W Metal Oxide	AA
R2203	VRS-CY1JF473JY	X	47k 1/16W Metal Oxide	AA
R2211	VRS-CY1JF222JY	X	2.2k 1/16W Metal Oxide	AA
R2212	VRS-CY1JF682JY	X	6.8k 1/16W Metal Oxide	AA
R2213	VRS-CY1JF333JY	X	33k 1/16W Metal Oxide	AA
R2401	VRD-RA2BE101JY	X	100 1/8W Carbon	AA
R2402	VRD-RA2BE101JY	X	100 1/8W Carbon	AA
R2403	VRD-RA2BE101JY	X	100 1/8W Carbon	AA
R2404	VRD-RA2BE101JY	X	100 1/8W Carbon	AA
R2501	VRS-CY1JF183JY	X	18k 1/16W Metal Oxide	AA
R2502	VRS-CY1JF183JY	X	18k 1/16W Metal Oxide	AA
R2503	VRS-CY1JF103JY	X	10k 1/16W Metal Oxide	AA
R2504	VRS-CY1JF103JY	X	10k 1/16W Metal Oxide	AA
R2509	VRS-CY1JF000JY	X	0 1/16W Metal Oxide	AA
R3001	VRS-CY1JF221JY	X	220 1/16W Metal Oxide	AA
R3002	VRS-CY1JF221JY	X	220 1/16W Metal Oxide	AA
R3003	VRS-CY1JF105JY	X	1M 1/16W Metal Oxide	AA
R3004	VRS-CY1JF104JY	X	100k 1/16W Metal Oxide	AA
R3005	VRS-CY1JF623JY	X	62k 1/16W Metal Oxide	AA
R3007	VRS-CY1JF332JY	X	3.3k 1/16W Metal Oxide	AA
R3008	VRS-CY1JF302JY	X	3k 1/16W Metal Oxide	AA
R3010	VRS-CY1JF392JY	X	3.9k 1/16W Metal Oxide	AA
R3017	VRS-CY1JF102JY	X	1k 1/16W Metal Oxide	AA
R3018	VRS-CY1JF102JY	X	1k 1/16W Metal Oxide	AA
R3019	VRS-CY1JF101JY	X	100 1/16W Metal Oxide	AA
R3024	VRD-RA2BE102JY	X	1k 1/8W Carbon	AA

BALUNES

Ref. No.	Part No.	★	Description	Code
FB601	RBLN-0047CEZZY	X	Balun	AB
FB706	RBLN-0037CEZZY	X	Balun	AB
FB2001	RBLN-0037CEZZY	X	Balun	AB

MISCELLANEOUS PARTS

Ref. No.	Part No.	★	Description	Code
⚠ ACC701	QACCDA012WJPZ	X	AC Cord	AE
FH701	QFSHD1013CEZZ+	X	Fuse Holder	AB
FH702	QFSHD1014CEZZ+	X	Fuse Holder	AB
⚠ F701	QFS-B4023CEZZ	X	Fuse, 4A/125V	AB

Ref. No.	Part No.	★	Description	Code
J921	QSOCD0456CEZZ	X	Socket, S-Video	AC
J1401	QTANJ1101SEZZ	X	In Out Jack	AF
P361	QPLGN0461CEZZA	X	Plug, 4Pin(S)	AB
P401	QPLGN0861CEZZA	X	Plug, 8Pin(CJ)	AB
P601	QPLGN0161FJZZ	X	Plug, 6Pin(K)	AB
P621	QPLGN0761CEZZA	X	Plug, 7Pin(N)	AB
P651	QPLGN0361CEZZA	X	Plug, 3Pin(TP651-3)	AB
P702	QPLGN0269GEZZ	X	Plug, 2Pin(P)	AB
P703	QPLGN0260CEZZ	X	Plug, 2Pin(M)	AB
P1301	QPLGN0661CEZZA	X	Plug, 6Pin(EJ)	AB
P2003	QPLGN0561CEZZA	X	Plug, 5Pin(KA)	AB
P2401	QPLGN0661CEZZA	X	Plug, 6Pin	AB
RDA361	PRDAR0258PEFW	X	Heat Sink for IC361	AC
RDA501	PRDARA039WJFW	X	Heat Sink for IC501	AD
RDA601	PRDARA041WJFW	X	Heat Sink for Q602	AD
RDA671	PRDARA057WJFW	X	Heat Sink for Q673	AC
RDA701	PRDAR0279PEFW	X	Heat Sink for Q701	AB
RDA750	PRDAR5072CEFW	X	Heat Sink for IC751	AB
RDA1403	PRDAR5072CEFW	X	Heat Sink for IC1403	AB
⚠ RY701	RRLYJ0081CEZZ	X	Relay	AD
RY702	RRLYJ0088CEZZ	X	Relay	AC
CF2040	RCRM-0003CEZZ+	X	Ceramic Vibrator	AC
TP701	QLUGP0102PEZZ	X	Lug	AA

DUNTKA527WEW7
PWB-B CRT UNIT

INTEGRATED CIRCUIT

Ref. No.	Part No.	★	Description	Code
⚠ IC850	VHiTDA6103Q-1	X	TDA6103Q/N3	AG

TRANSISTORS

Ref. No.	Part No.	★	Description	Code
Q850	VS2SA1266-Y-1+	X	2SA1266-Y	AB
Q851	VS2SC3198-G-1+	X	2SC3198-G	AB
Q1504	VS2SC3198-G-1+	X	2SC3198-G	AB
Q1505	VS2SA1266-Y-1+	X	2SA1266-Y	AB
Q1506	VS2SA1964E/-1	X	2SA1964E	AC
Q1507	VS2SC5248E/-1	X	2SC5248E	AC

DIODES

Ref. No.	Part No.	★	Description	Code
D850	RH-DX0220CEZZY	X	DX0220CE	AB
D851	RH-DX0220CEZZY	X	DX0220CE	AB
D852	RH-DX0220CEZZY	X	DX0220CE	AB
D853	RH-EX0647GEZZY	X	Zener Diode, 15V	AB
D854	VHD1SS119//-1Y	X	1SS119	AA
D855	VHD1SS119//-1Y	X	1SS119	AA
D862	VHD1SS119//-1Y	X	1SS119	AA
D1502	VHD1SS119//-1Y	X	1SS119	AA
D1503	VHD1SS119//-1Y	X	1SS119	AA
D1506	RH-DX0487CEZZY	X	DX0487CE	AB
D1507	RH-DX0487CEZZY	X	DX0487CE	AB
D1510	VHD1SS119//-1Y	X	1SS119	AA

CAPACITORS

Ref. No.	Part No.	★	Description	Code
C850	VCFYSB2EB224K	X	0.22 250V	AB
C851	RC-KZ018JCEZZ	X	0.01 AC250V Ceramic	AB
C852	VCEA0A1CW107M+	X	100 16V Electrolytic	AB
C853	VCFYFA1HA224J+	X	0.22 50V Mylar	AB
C854	VCEA0A1CW227M+	X	220 16V Electrolytic	AB
C855	VCEA0A2EW106M+	X	10 250V Electrolytic	AB
C856	VCEA0A1HW226M+	X	22 50V Electrolytic	AB
C1501	VCEA0A1CW476M+	X	47 16V Electrolytic	AB
C1506	VCKYPA1HF103Z+	X	0.01 50V Ceramic	AA
C1508	VCKYPA2HB472K+	X	4700p 500V Ceramic	AB
C1509	VCKYPA1HB472K+	X	4700p 50V Ceramic	AB
C1510	VCKYPA1HF103Z+	X	0.01 50V Ceramic	AA
C1511	VCKYPA1HF103Z+	X	0.01 50V Ceramic	AA
C1515	VCEA0A1HW476M+	X	47 50V Electrolytic	AB
C1516	VCEA0A1HW476M+	X	47 50V Electrolytic	AB
C1517	VCEA0A2AW106M+	X	10 100V Electrolytic	AB
C1518	VCCSPA2HL560K+	X	56p 500V Ceramic	AB
C1519	VCEA0A2CW106M+	X	10 160V Electrolytic	AB

RESISTORS

Ref. No.	Part No.	★	Description	Code
⚠ R850	VRS-SV2HC152J	X	1.5k 1/2W Metal Oxide	AB
⚠ R851	VRS-SV2HC152J	X	1.5k 1/2W Metal Oxide	AB
⚠ R852	VRS-SV2HC152J	X	1.5k 1/2W Metal Oxide	AB
⚠ R853	VRS-SV2HC272J	X	2.7k 1/2W Metal Oxide	AB
⚠ R854	VRS-SV2HC272J	X	2.7k 1/2W Metal Oxide	AB
⚠ R855	VRS-SV2HC272J	X	2.7k 1/2W Metal Oxide	AB
R856	VRD-RM2HD104JY	X	100k 1/2W Carbon	AA
R857	VRD-RM2HD104JY	X	100k 1/2W Carbon	AA
R858	VRD-RM2HD104JY	X	100k 1/2W Carbon	AA
R861	VRD-RM2HD104JY	X	100k 1/2W Carbon	AA
R862	VRC-MA2HG152KY	X	1.5k 1/2W Solid	AB
R863	VRC-MA2HG152KY	X	1.5k 1/2W Solid	AB
R864	VRC-MA2HG152KY	X	1.5k 1/2W Solid	AB
⚠ R867	VRS-SV2HC392J	X	3.9k 1/2W Metal Oxide	AB
⚠ R868	VRS-SV2HC682J	X	6.8k 1/2W Metal Oxide	AB
R869	VRD-RA2BE103JY	X	10k 1/8W Carbon	AA
R870	VRD-RA2BE223JY	X	22k 1/8W Carbon	AA
R871	VRD-RA2BE472JY	X	4.7k 1/8W Carbon	AA
R872	VRD-RA2EE680JY	X	68 1/4W Carbon	AA
R873	VRD-RM2HD224JY	X	220k 1/2W Carbon	AA
R874	VRD-RM2HD104JY	X	100k 1/2W Carbon	AA
R875	VRD-RM2HD104JY	X	100k 1/2W Carbon	AA
R876	VRD-RM2HD104JY	X	100k 1/2W Carbon	AA
R877	VRD-RA2BE103JY	X	10k 1/8W Carbon	AA
⚠ R878	VRS-SV2HC120J	X	12 1/2W Metal Oxide	AB
R1511	VRD-RA2BE101JY	X	100 1/8W Carbon	AA
⚠ R1513	VRS-VV3DB561J	X	560 2W Metal Oxide	AB
R1514	VRD-RA2BE100JY	X	10 1/8W Carbon	AA
R1515	VRD-RA2BE820JY	X	82 1/8W Carbon	AA
R1516	VRD-RA2BE820JY	X	82 1/8W Carbon	AA
R1517	VRD-RA2BE122JY	X	1.2k 1/8W Carbon	AA
R1518	VRD-RA2BE683JY	X	68k 1/8W Carbon	AA
R1519	VRD-RA2BE123JY	X	12k 1/8W Carbon	AA
R1520	VRD-RA2BE683JY	X	68k 1/8W Carbon	AA
R1521	VRD-RA2BE122JY	X	1.2k 1/8W Carbon	AA
R1525	VRD-RA2EE560JY	X	56 1/4W Carbon	AA
R1526	VRD-RA2EE560JY	X	56 1/4W Carbon	AA
R1527	VRD-RM2HD1R5JY	X	1.5 1/2W Carbon	AA
R1528	VRD-RM2HD1R5JY	X	1.5 1/2W Carbon	AA
⚠ R1529	VRS-VV3DB221J	X	220 2W Metal Oxide	AB
R1530	VRD-RA2BE122JY	X	1.2k 1/8W Carbon	AA

BALUN

Ref. No.	Part No.	★	Description	Code
FB1501	RBLN-0020CEZZ+	X	Balun	AB

MISCELLANEOUS PARTS

Ref. No.	Part No.	★	Description	Code
P854	QPLGN0741CEZZ	X	Plug, 7Pin(N)	AB
P860	QPLGN0841CEZZ	X	Plug, 8Pin(CJ)	AB
⚠ P861	QPLGN0241CEZZ	X	Plug	AB
RDA850	PRDAR0248PEFW	X	Heat Sink for IC850	AB
RDA1506	PRDAR5072CEFW	X	Heat Sink for Q1506	AB
RDA1507	PRDAR5072CEFW	X	Heat Sink for Q1507	AB
SC850	QSOCV1011CEZZ	X	Socket, 12Pin	AC

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PWB-D 2 LINE Y/C UNIT

INTEGRATED CIRCUIT

Ref. No.	Part No.	★	Description	Code
IC1401	VHiTC90A45F-1Y	X	TC90A45F	AH

TRANSISTORS

Ref. No.	Part No.	★	Description	Code
Q1401	VS2SD601AR/-1Y	X	2SD601AR	AB
Q1402	VS2SD601AR/-1Y	X	2SD601AR	AB
Q1404	VS2SB709AR/-1Y	X	2SB709AR	AB

COILS

Ref. No.	Part No.	★	Description	Code
L1401	VP-XF100K0000Y	X	Peaking, 10µH	AB
L1402	VP-XF100K0000Y	X	Peaking, 10µH	AB
L1403	VP-XF100K0000Y	X	Peaking, 10µH	AB
L1404	VP-XF220K0000Y	X	Peaking, 22µH	AB
L1405	VP-XF220K0000Y	X	Peaking, 22µH	AB
L1408	VP-XF100K0000Y	X	Peaking, 10µH	AB

CAPACITORS

Ref. No.	Part No.	★	Description	Code
C1401	VCKYCY1HB103KY	X	0.01 50V Ceramic	AA
C1402	VCEA0A1AW227M+	X	220 10V Electrolytic	AB
C1403	VCCCCY1HH330JY	X	33p 50V Ceramic	AA
C1404	VCCCCY1HH181JY	X	180p 50V Ceramic	AB
C1405	VCKYCY1HB103KY	X	0.01 50V Ceramic	AA
C1406	VCKYCY1HB103KY	X	0.01 50V Ceramic	AA
C1407	VCKYCY1HB103KY	X	0.01 50V Ceramic	AA
C1408	VCKYCY1HB103KY	X	0.01 50V Ceramic	AA
C1409	VCEA0A1CW476M+	X	47 16V Electrolytic	AB
C1410	VCKYCY1HB103KY	X	0.01 50V Ceramic	AA
C1411	VCKYCY1HB103KY	X	0.01 50V Ceramic	AA
C1412	VCKYCY1HB103KY	X	0.01 50V Ceramic	AA
C1413	VCKYCY1HB103KY	X	0.01 50V Ceramic	AA
C1414	VCE9GA1HW105M+	X	1 50V Electrolytic	AB
C1415	VCCCCY1HH120JY	X	12p 50V Ceramic	AA
C1416	VCCCCY1HH3R0CY	X	3p 50V Ceramic	AA
C1417	VCCCCY1HH270JY	X	27p 50V Ceramic	AA
C1418	VCCCCY1HH120JY	X	12p 50V Ceramic	AA
C1419	VCCCCY1HH3R0CY	X	3p 50V Ceramic	AA
C1420	VCCCCY1HH270JY	X	27p 50V Ceramic	AA
C1423	VCFYFA1HA474J+	X	0.47 50V Mylar	AB
C1424	VCEA0A1CW107M+	X	100 16V Electrolytic	AB
C1425	VCCCCY1HH820JY	X	82p 50V Ceramic	AA
C1429	VCEA0A1CW107M+	X	100 16V Electrolytic	AB
C1430	VCKYCY1CB104KY	X	0.1 16V Ceramic	AA
C1431	VCKYCY1HB103KY	X	0.01 50V Ceramic	AA
C1432	VCKYCY1HB103KY	X	0.01 50V Ceramic	AA

RESISTORS

Ref. No.	Part No.	★	Description	Code
R1401	VRS-CY1JF821JY	X	820 1/16W Metal Oxide	AA
R1402	VRS-CY1JF000JY	X	0 1/16W Metal Oxide	AA
R1403	VRS-CY1JF361JY	X	360 1/16W Metal Oxide	AA
R1415	VRS-CY1JF391JY	X	390 1/16W Metal Oxide	AA
R1416	VRS-CY1JF102JY	X	1k 1/16W Metal Oxide	AA
R1417	VRS-CY1JF152JY	X	1.5k 1/16W Metal Oxide	AA
R1421	VRS-CY1JF152FY	X	1.5k 1/16W Metal Oxide	AA
R1423	VRS-CY1JF102FY	X	1k 1/16W Metal Oxide	AA
R1427	VRS-CY1JF000JY	X	0 1/16W Metal Oxide	AA
R1428	VRD-RA2BE332JY	X	3.3k 1/8W Carbon	AA
R1429	VRS-CY1JF000JY	X	0 1/16W Metal Oxide	AA
R1430	VRS-CY1JF151JY	X	150 1/16W Metal Oxide	AA

MISCELLANEOUS PART

Ref. No.	Part No.	★	Description	Code
P1401	QPLGZ0810CEZZ	X	Plug, 8Pin(CJ)	AB

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PWB-F CONTROL UNIT

CAPACITOR

Ref. No.	Part No.	★	Description	Code
C4001	VCEA0A1HW476M+	X	47 50V Electrolytic	AB

RESISTORS

Ref. No.	Part No.	★	Description	Code
R4001	VRD-RA2BE470JY	X	47 1/8W Carbon	AA
R4006	VRD-RA2BE822JY	X	8.2k 1/8W Carbon	AA
R4007	VRD-RA2BE822JY	X	8.2k 1/8W Carbon	AA
R4009	VRD-RA2BE183JY	X	18k 1/8W Carbon	AA
R4011	VRD-RA2BE183JY	X	18k 1/8W Carbon	AA
R4020	VRD-RA2BE750JY	X	75 1/8W Carbon	AA

SWITCHES

Ref. No.	Part No.	★	Description	Code
S4001	QSW-KA003WJZZ+	X	Switch, POWER	AB
S4002	QSW-KA003WJZZ+	X	Switch, MENU	AB
S4003	QSW-KA003WJZZ+	X	Switch, VOL.-DOWN	AB
S4004	QSW-KA003WJZZ+	X	Switch, VOL.-UP	AB
S4005	QSW-KA003WJZZ+	X	Switch, CH-DOWN	AB
S4006	QSW-KA003WJZZ+	X	Switch, CH-UP	AB

MISCELLANEOUS PARTS

Ref. No.	Part No.	★	Description	Code
J4001	QJAKGA031WJZZ	X	Input-2 Jack	AC
P4001	QPLGN0641CEZZ	X	Plug, 6Pin(EJ)	AB
P4004	QPLGN0541CEZZ	X	Plug, 5Pin(KA)	AB
RMC4001	RRMCU0222CEZZ	X	Remote Receiver	AD

MISCELLANEOUS PARTS

Ref. No.	Part No.	★	Description	Code
SP1	VSP1206PB648A	X	Speaker(L)	AG
SP2	VSP1206PB648A	X	Speaker(R)	AG
	QCNW-A475WJZZ	X	Connecting Cord	AC
	QCNW-B175WJZZ	X	Connecting Cord	AC
	QCNW-B176WJZZ	X	Connecting Cord	AC
	QCNW-B240WJZZ	X	Connecting Cord	AE
	QCNW-B241WJZZ	X	Connecting Cord	AB

SUPPLIED ACCESSORIES

Ref. No.	Part No.	★	Description	Code
	RRMCGA035WJSB	X	Infrared R-C Unit	AR
	TGAN-A216WJN1	X	Guarantee Card	AB
	TiNS-B092WJZZ	X	Operation Manual	

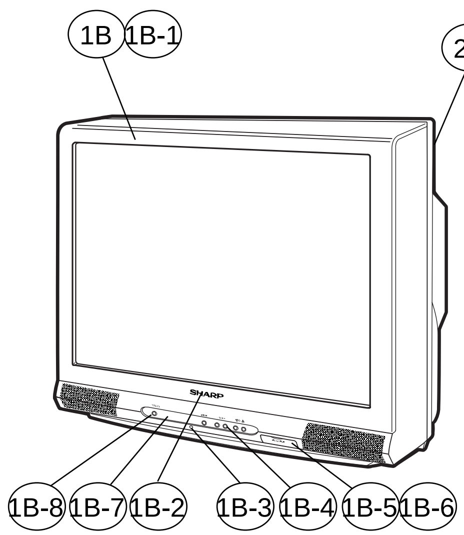
PACKING PARTS
(NOT REPLACEMENT ITEM)

Ref. No.	Part No.	★	Description	Code
	SPAKCB276WJZZ	–	Packing Case	—
	SPAKCA590WJZZ	–	Packing Case	—
	SPAKP0110GJZZ	–	Wrapping Paper	—
	SPAKX0131GJZZ	–	Packing Add.	—
	SSAKA0101GJZZ	–	Polyethylene Bag	—

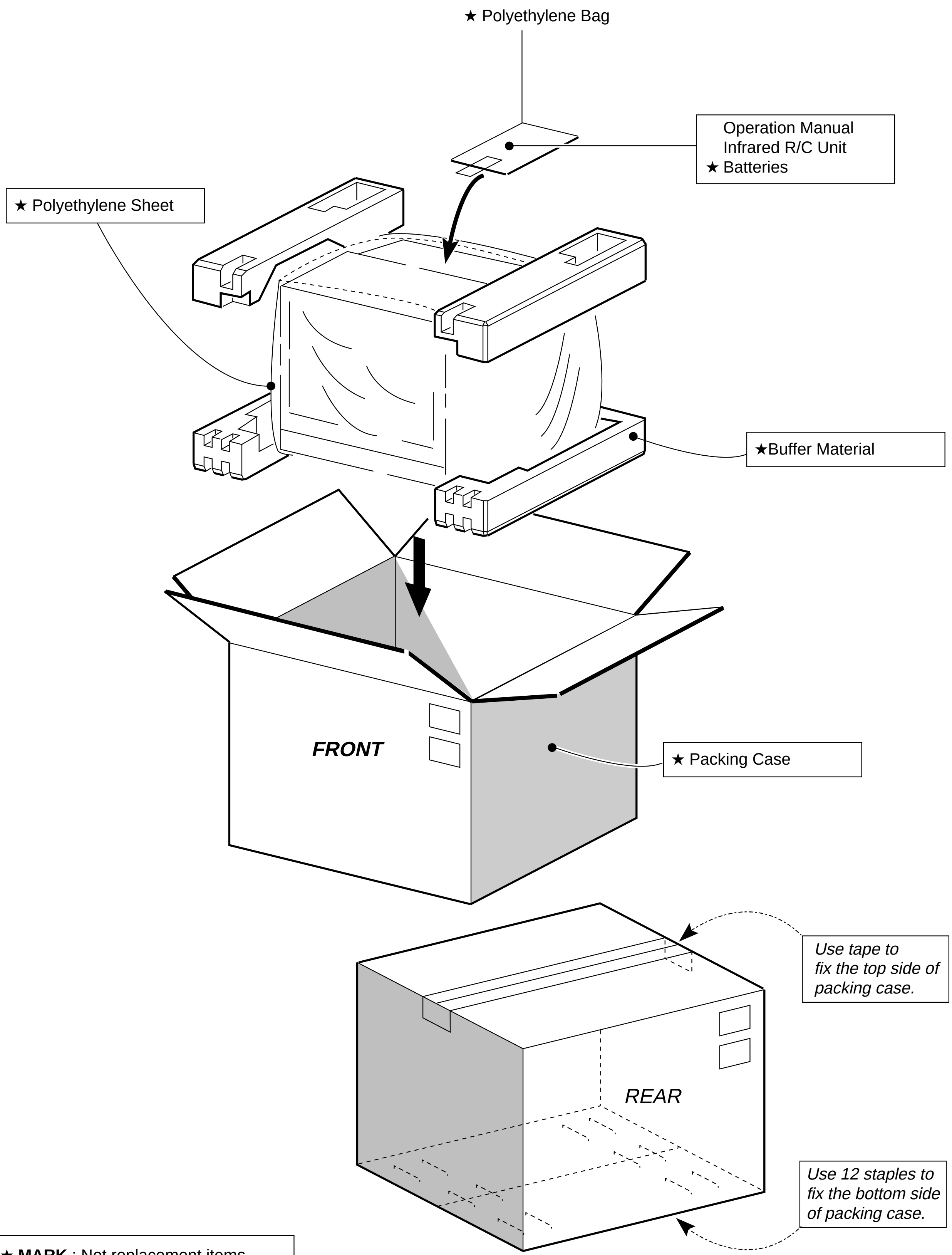
CABINET PARTS

Ref. No.	Part No.	★	Description	Code
1B	CCABA0176WEH6	X	Front Cabinet Ass'y	
1B-1	*Not Available*	-	Front Cabinet	—
1B-2	HBDGB3141CESA	X	Badge	AD
1B-3	HDECQ0105GJKA	X	Decoration Plate	AF
1B-4	JBTN-0128GJKA	X	Button	AC
1B-5	GDORF0105GJKD	X	Door	
1B-6	HiNDP0107GJSA	X	Indicator	AB
1B-7	HDECQ0104GJKA	X	Decoration Plate	AF
1B-8	JBTN-0129GJKA	X	Button	AB
2B	GCABB0160GJKB	X	Rear Cabinet	BB

CABINET PARTS LOCATION



PACKING OF THE SET



★ **MARK** : Not replacement items.

SHARP

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Design and Production Information
Design : JAPAN
Production : SEMEX

MY. DS

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